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

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|---|---|
| **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
 miniprezentácie na dané témy
 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

**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 úrovni ovládania jazyka (B2) podľa Spoločného európskeho referenčného rámca pre jazyky). Predmet kladie dôraz na používanie 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: 295

| A | B | C | D | E | FX |
|-------|-------|-------|-------|------|-------|
| 28.81 | 22.37 | 16.27 | 11.53 | 8.14 | 12.88 |

**Provides:** PaedDr. Gabriela Bednáriková

**Date of last modification:** 06.09.2016

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

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

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

**Number of credits:** 4

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

**Course level:** I.

**Prerequisities:** ÚMV/ALG2b/10

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

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

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

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

**Course language:**
Slovak

**Notes:**

**Course assessment**
  Total number of assessed students: 113

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 10.62 | 17.7 | 27.43 | 22.12 | 16.81 | 5.31 |

**Provides:** doc. RNDr. Matúš Harminc, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **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: 1250

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 10.8 | 11.12 | 17.6 | 17.76 | 29.68 | 13.04 |

**Provides:** prof. RNDr. Danica Studenovská, CSc., RNDr. Igor Fabrici, Dr. rer. nat., Mgr. Martina Sabová, RNDr. Miroslava Černegová, Mgr. Jana Chudá, RNDr. Anna Mišková

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

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

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

**Number of credits:** 7

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

**Course level:** I.

**Prerequisities:** ÚMV/ALGa/10

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

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

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

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

**Course language:**
 Slovak

**Notes:**

**Course assessment**
 Total number of assessed students: 478

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 12.76 | 11.92 | 17.36 | 18.2 | 29.08 | 10.67 |

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

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** KPE/ ALP/06 | **Course name:** Alternative Education |
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| **Course type, scope and the method:** <br> **Course type:** Practice <br> **Recommended course-load (hours):** <br> **Per week:** 2 **Per study period:** 28 <br> **Course method:** present |

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| **Number of credits:** 2 |

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

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| **Course level:** I. |

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| **Prerequisities:** |

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| **Conditions for course completion:** |

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| **Learning outcomes:** |

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| **Brief outline of the course:** |

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| **Recommended literature:** |

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| **Course language:** |

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| **Notes:** |

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

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 78.46 | 18.46 | 0.0 | 1.54 | 0.0 | 1.54 |

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

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| **Date of last modification:** 03.05.2015 |

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| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

| **Faculty:** Faculty of Science |
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| **Course ID:** ÚINF/ AFJ1a/15 | **Course name:** Automata and formal languages |
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**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:**

**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, R.Motwani, J.D. Ullman: Introduction to automata theory, languages, and computation, Addison-Wesley, 2001.
 J. Shallit: A second course in formal languages and automata theory, Cambridge University press, 2009.
 M. Sipser: Introduction to the theory of computation, Thomson Course Technology, 2006.

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 741

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 22.94 | 17.95 | 24.29 | 19.03 | 10.53 | 5.26 |

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

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** ÚGE/ BKP/14 | **Course name:** Bachelor Project |
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| **Course type, scope and the method:**<br> **Course type:**<br> **Recommended course-load (hours):**<br> **Per week:  Per study period:**<br> **Course method:** present |
| **Number of credits:** 2 |
| **Recommended semester/trimester of the course:** 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: 19 | |
|---|---|
| abs | n |
| 94.74 | 5.26 |

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| **Provides:** |
| **Date of last modification:** 03.05.2015 |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

**Faculty:** Faculty of Science

| **Course ID:** ÚMV/ BKP2/14 | **Course name:** Bachelor Project |
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**Course type, scope and the method:**
 **Course type:** Practice
 **Recommended course-load (hours):**
 **Per week:** 1 **Per study period:** 14
 **Course method:** present

**Number of credits:** 2

**Recommended semester/trimester of the course:** 5.

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
 To prepare and present a contribution related to thesis and its topic.

**Learning outcomes:**
 To get students familiar with basic knowledge on the form and content of thesis and thesis presentation as well as with the support for its realisation.

**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:**
 electronic information sources

**Course language:**
 Slovak or English

**Notes:**

**Course assessment**
 Total number of assessed students: 93

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

**Provides:** doc. RNDr. Dušan Šveda, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ BPO/14 | **Course name:** Bachelor thesis and its defence |
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**Course type, scope and the method:**
 Course type:
 Recommended course-load (hours):
 Per week:  Per study period:
 Course method: present

**Number of credits:** 4

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

**Course level:** I.

**Prerequisities:**

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

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

**Brief outline of the course:**
 Presentation of results of the bachelor thesis, answering the questions of the thesis supervisor and answering the questions of members of evaluation commitee.

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 18

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 61.11 | 27.78 | 5.56 | 0.0 | 5.56 | 0.0 |

**Provides:**

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ BPO/14 | **Course name:** Bachelor Thesis and its Defence |
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**Course type, scope and the method:**
  **Course type:**
  **Recommended course-load (hours):**
  **Per week:  Per study period:**
  **Course method:** present

**Number of credits:** 4

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

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

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 33.33 | 30.0 | 16.67 | 10.0 | 10.0 | 0.0 |

**Provides:**

**Date of last modification:** 31.07.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ SMG/10 | **Course name:** Basic statistics for geography |
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**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:** 4.

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
 Project and tests durind the semester.
 Given at the basis of partial examination and final test.

**Learning outcomes:**
 To understand basics of descriptive and inferential statistics used in natural sciences.

**Brief outline of the course:**
 Data types. Frequencies. Measures of central tendency, variability and concentration. Quantiles. Basic theoretical probability distributions. Point and interval estimation. Basic hypothesis tests. Correlation and regression analysis.

**Recommended literature:**
 Wonnacott, Wonnacott: Introductory Statistics, Wiley 1977
 Rogerson P.: Statistical methods for geography, SAGE Publications, London, 2001

**Course language:**
 Slovak

**Notes:**

**Course assessment**
 Total number of assessed students: 396

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 4.8 | 8.84 | 18.43 | 30.81 | 28.79 | 8.33 |

**Provides:** RNDr. Daniel Klein, PhD., Mgr. Andrej Gajdoš, RNDr. Veronika Kopčová

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

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| **Course ID:** ÚGE/ KAR/05 | **Course name:** Basis of karstology and speleology |

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

**Number of credits:** 2

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 196

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 78.57 | 13.27 | 6.12 | 0.0 | 2.04 | 0.0 |

**Provides:** doc. RNDr. Zdenko Hochmuth, CSc., RNDr. Alena Gessert, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

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

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

**Number of credits:** 2

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
 Written test

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

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

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

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 1159

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 34.17 | 23.12 | 17.0 | 16.48 | 8.8 | 0.43 |

**Provides:** doc. RNDr. Monika Kassayová, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** ÚMV/ ZBR/14 | **Course name:** Bridge Fundamentals |
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| **Course type, scope and the method:** <br> **Course type:** Practice <br> **Recommended course-load (hours):** <br> **Per week:** 2 **Per study period:** 28 <br> **Course method:** present |

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| **Number of credits:** 2 |

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| **Recommended semester/trimester of the course:** 5. |

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| **Course level:** I. |

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| **Prerequisities:** |

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| **Conditions for course completion:** <br> Active participation on exercises. |

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

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

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

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| **Course language:** <br> Slovak or English |

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| **Notes:** <br> Minimum number of participants is 4. |

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| **Course assessment** <br> Total number of assessed students: 13 |

| abs | n |
|---|---|
| 92.31 | 7.69 |

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| **Provides:** doc. RNDr. Miroslav Ploščica, CSc., prof. RNDr. Mirko Horňák, CSc. |
| **Date of last modification:** 03.05.2015 |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice |
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| Faculty: Faculty of Science |
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| Course ID: ÚGE/ KAG/15 | Course name: Cartography and Geoinformatics |
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**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:**

**Conditions for course completion:**
During the semester student must hand in the outputs of exercise. Their number will be announced at the beginning of the semester. The final assessment of the exercises is based on the method fulfilled / not fulfilled.
The final assessment of the course is based on final exam. The student can undertake the final exam only after successful completion of the exercises.
The final exam consists of two parts:
- A written part – to get the A mark must be obtained at least 92 % of the total number of points, to get B must be obtained at least 84 % of the total number of points , C at least 75 %, D at least 68 %, E at least 60 % of total number of points.
- Oral – a student takes out two issues of the two question groups. (1 question is from the theoretical, thematic a selected issue of mathematical cartography, one question is from the geoinformatics).
The final assessment is calculated as a weighted average of the written part ( 1/3 ) and oral ( 2/3 ) , while student must obtaine at least mark E from both parts of the final exam.

**Learning outcomes:**
The main learning outcomes include theoretical and practical skills in cartography and geoinformatics. Students understand cartographic and GIS terminology, students can apply cartographic approaches and methods using GIS, projections and define the content and composition of maps in GIS.

**Brief outline of the course:**
Cartography - the branch of science, position in the system of sciences, the history of cartography, topographic mapping in Slovakia; Cartographic projects, cartographic interpretation; Description maps, geographical names, cartographic generalization, State map series; Cartometry and morphometry; Mathematical cartography (reference area map projection and distortion).
Geoinformatics – the branch of science, elements of GIS, digital representation of landscape, raster and vector data, data collection and processing data for GIS, geospatial database, visualization and cartographic representation using GIS, applications of GIS.

**Recommended literature:**
ROBINSON, A. H. et al. 1995:ElementsofCartography. Wiley&sons. 674 s.
PRAVDA, J., KUSENDOVÁ, D. 2007: Aplikovaná kartografia. Geo-grafika, Bratislava, 224 s.

HOFIERKA, J. 2003: Geografické informační systémy a diaľkový prieskum Zeme. Vysokoškolské skriptá. Prešovská univerzita, Prešov. 106 s. Dostupné na: http://web.science.upjs.sk/hofierka/vyuka/Hofierka_GIS&DPZ.zip
ArcGIS10Web Help. ArcGISResource Center. Environmental Research Institute. Dostupné na: http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html LONGLEY, P. A., GOODCHILD, M. F., MAGUIRE, D. J., RHIND, D. W. 2001: Geographic Information Systems and Science. John Wiley & Sons.

| **Course language:** |
|---|

| **Notes:** |
|---|

**Course assessment**
Total number of assessed students: 174

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 10.92 | 19.54 | 22.41 | 17.24 | 25.29 | 4.6 |

**Provides:** RNDr. Ján Kaňuk, PhD., prof. Ing. Vladimír Sedlák, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** KOP/ OPaPDV/14 | **Course name:** Civil Law and Intellectual Property Rights |
|---|---|

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

| |
|---|
| **Number of credits:** 4 |

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

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|---|
| **Course level:** I., N |

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| **Prerequisities:** |

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| **Conditions for course completion:** |

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| **Learning outcomes:** |

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|---|
| **Brief outline of the course:** |

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| **Recommended literature:** |

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| **Course language:** |

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| **Notes:** |

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

| abs | n |
|---|---|
| 85.71 | 14.29 |

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| **Provides:** JUDr. Renáta Bačárová, PhD., LL.M. |

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| **Date of last modification:** 06.06.2016 |

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| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

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

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

**Number of credits:** 2

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

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

**Prerequisities:**

**Conditions for course completion:**
 Active participation in class and completed homework assignments. Students are allowed to miss two classes at the most.
 Continuous assessment: 2 credit tests (presumably in weeks 6 and 13) and academic presentation in English.
 Test 1 = 40 points, test 2 = 40 points, presentation = 20 points.
 In order to pass the course, it is necessary to score at least 65 points as a sum of test and presentation scores.
 Final grade will be calculated as follows:
 A 93-100 %, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64 % and less

**Learning outcomes:**
 Uplatnenie a aktívne používanie svojich teoretických vedomostí v praktických komunikačných situáciách. Zdokonalenie jazykových vedomostí a zručností študenta, rečovej, pragmatickej a vecnej kompetencie, predovšetkým zlepšujú komunikáciu, schopnosť prijímať 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: 191

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 38.22 | 21.99 | 18.85 | 9.42 | 7.33 | 4.19 |

**Provides:** Mgr. Zuzana Naďová

**Date of last modification:** 01.09.2016

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** KGER/ NJKK/07 | **Course name:** Communicative Competence in German Language |
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| **Course type, scope and the method:** <br>  **Course type:** Practice <br>  **Recommended course-load (hours):** <br> **Per week:** 2 **Per study period:** 28 <br>  **Course method:** present |
| **Number of credits:** 2 |
| **Recommended semester/trimester of the course:** |
| **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: 44

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 59.09 | 13.64 | 6.82 | 4.55 | 13.64 | 2.27 |

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| **Provides:** Mgr. Eva Černáková, PhD. |
| **Date of last modification:** 03.05.2015 |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice |
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| Faculty: Faculty of Science |
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| Course ID: CJP/ PFAJGA/07 | Course name: Communicative Grammar in English |
|---|---|

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

| Number of credits: 2 |
|---|

| Recommended semester/trimester of the course: |
|---|

| Course level: I., II., N |
|---|

| Prerequisities: |
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| Conditions for course completion: |
|---|
| kontrolná písomná práca, <br> záverečná písomná práca <br> stupnica hodnotenia: A 93-100, B 86-92, C 79-85, D 65-71, 64 a menej - FX <br> aktivita na hodinách, povolené 2 absencie <br> predmet je ukončený hodnotením |

| 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 <br> Zločin a trest <br> Cestovanie po mori a vzduchom <br> Jedlá a reštaurácie, národná kuchyňa <br> Vzdelanie na vysokých školách <br> História a viera <br> Vybrané problémy anglickej výslovnosti, gramatiky ( nepriama reč, slovotvorba, predložkové väzby, anglická syntax, kondicionály v angličtine a slovnej zásoby príslušného zamerania <br> Vybrané funkcie praktického odborného jazyka potrebné na prácu s odborným textom |

| Recommended literature: |
|---|
| Misztal M.: Thematic Vocabulary, 1994 <br> McCarthy, O'Dell: English Vocabulary in Use, 1994 <br> Alexander L.G.: Longman English Grammar, Longman, 1988 <br> Jones I. - Communicative Grammar Practice, CUP, 1992 <br> Vince M.: Macmillan Grammar in Context, Macmillan, 2008 <br> www.bbclearningenglish.com <br> Gráf T., Peters S.: Time to practise, Polyglot, 2007 |

| Course language: | | | | | |
|---|---|---|---|---|---|
| **Notes:** | | | | | |
| **Course assessment**<br>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:** 06.09.2016 | | | | | |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. | | | | | |

# COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** KGER/ NJKG/07 | **Course name:** Communicative Grammar in German Language |
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| **Course type, scope and the method:**<br> **Course type:** Practice<br> **Recommended course-load (hours):**<br> **Per week:** 2 **Per study period:** 28<br> **Course method:** present |
| **Number of credits:** 2 |
| **Recommended semester/trimester of the course:** |
| **Course level:** I., II. |
| **Prerequisities:** |
| **Conditions for course completion:** |
| **Learning outcomes:** |
| **Brief outline of the course:** |
| **Recommended literature:** |
| **Course language:** |
| **Notes:** |

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| **Course assessment**<br> Total number of assessed students: 46 |

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

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| **Provides:** PaedDr. Ingrid Puchalová, PhD. |
| **Date of last modification:** 03.05.2015 |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

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|---|---|
| **Course ID:** ÚGE/ KRS/08 | **Course name:** Complex geographic characteristics of selected world regions |

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

**Number of credits:** 3

**Recommended semester/trimester of the course:** 6.

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

**Prerequisities:**

**Conditions for course completion:**
At the beginning of semester, students will be told the topics to be drawn up as written report and presented in a slideshow. This part is 50 % of total grading. The results of tests written during the semester constitute another 50 % of total grading. To obtain A grade, weighted average of the both parts of examination must reach at least 90%, To obtain B it is 80%, for C it is 70%, for D 60% and for E 50%. Credits shall not be granted to a student who obtain less than 50 % from any of both parts of examination.

**Learning outcomes:**
Understanding of causal relations between individual geographic phenomena in spatial and temporal context of individual regions; extended knowledge about selected regions.

**Brief outline of the course:**
Geographic location, geologic history and structure, orography and shapes of coast, climate, hydrology, soils and biogeography, protection of nature, current landscape and its transformation, historical and political development, population and sites, economy and integration groupings in selected regions of the world.

**Recommended literature:**
DE BLIJ, H. J. et al: 2013: The World Today - Concepts and Regions in Geography, 6th edition. New York (Wiley), 528 p.
HOBBS, J. J. 2010: Fundaments of World Regional Geography, 2nd edition. Belmont (Brooks/ Cole), 438 p.
WEIGHTMAN, B. 2010: Dragons and Tigers – A Geography of South, East and Southeast Asia, 3rd edition. Hoboken (Wiley), 523 p.
BAAR, V. 2002: Národy na prahu 21. století. Emancipace nebo nacionalismus? Ostrava (Ostravská univerzita), 416 s.
BRADSHAW, W. et al. 2012: Contemporary World Regional Geography, 4th edition. New York (McGrawHill), 620 p.

**Course language:**
 Slovak and English

**Notes:**

| Course assessment | | | | | |
|---|---|---|---|---|---|
| Total number of assessed students: 402 | | | | | |
| A | B | C | D | E | FX |
| 29.85 | 35.57 | 21.14 | 8.46 | 4.23 | 0.75 |

**Provides:** Mgr. Ladislav Novotný, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ DSMa/10 | **Course name:** Discrete mathematics I |
|---|---|

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

**Number of credits:** 5

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
 Examination.

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

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

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

**Course language:**
 Slovak

**Notes:**

**Course assessment**
 Total number of assessed students: 515

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 12.82 | 10.87 | 17.28 | 22.72 | 27.57 | 8.74 |

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| **Provides:** prof. RNDr. Stanislav Jendroľ, DrSc., RNDr. Mária Maceková, PhD., Mgr. Juraj Valiska |
| **Date of last modification:** 03.05.2015 |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ DSMb/10 | **Course name:** Discrete mathematics II |
|---|---|

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

**Number of credits:** 5

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

**Course level:** I.

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

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

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

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

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

**Course language:**
 Slovak

| Notes: | | | | | |
|---|---|---|---|---|---|
| **Course assessment**<br>Total number of assessed students: 357 | | | | | |
| A | B | C | D | E | FX |
| 11.76 | 8.96 | 16.25 | 19.05 | 29.13 | 14.85 |
| **Provides:** prof. RNDr. Stanislav Jendroľ, DrSc., RNDr. Michaela Vrbjarová, PhD. | | | | | |
| **Date of last modification:** 03.05.2015 | | | | | |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. | | | | | |

# COURSE INFORMATION LETTER

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

**Faculty:** Faculty of Science

| **Course ID:** KPPaPZ/PUDB/15 | **Course name:** Drug Addiction Prevention in University Students |
|---|---|

**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., 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: 11

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 72.73 | 27.27 | 0.0 | 0.0 | 0.0 | 0.0 |

**Provides:** Mgr. Marianna Berinšterová, PhD., Prof. PhDr. Oľga Orosová, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| **University:** P. J. Šafárik University in Košice |
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| **Faculty:** Faculty of Science |
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| **Course ID:** ÚINF/ EDS/15 | **Course name:** Educational software |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 5.

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
1 Preparation of interim assignments:
a) Worksheet for student (with custom graphics)
b) Multimedia educational presentation (with pictures, animations and sounds)
c) Interactive educational quiz (with several types of quiz items)
d) Methodological guidance on the use of interactive applications in teaching selected topic of chosen school subject.
2 Creation and presentation of final project on the use of educational software in education.

**Learning outcomes:**
1. To acquire an overview of the educational software types and its exploitation in education.
2. To gain or enhance basic skills in working with:
a) presentation software, programs for creation and editing images, animations, diagrams, sounds, concept maps,
b) programs for creation of quizes, questionnaires, voting,
c) simulation and modeling software,
d) selected subject-oriented educational programs,
3. To create and present a final project on the use of educational software in education.

**Brief outline of the course:**
Educational software types. Onlilne educational sources and tools. Multimedia processing. Tools for creation of teaching aids.

**Recommended literature:**
1. Digitálna gramotnosť učiteľa : učebný materiál- modul 1 / Rastislav Adámek ... [et al.]. - Košice : Ústav informácií a prognóz školstva, 2009. - 80 s. - ISBN 9788080861193(brož.).
2. Moderná didaktická technika v práci učiteľa : učebný materiál modul 2 / Rastislav Adámek ... [et al.] ; recenzenti Viliam Fedák, Anton Lavrin. - Košice : Elfa, 2010. - 200 s. - ISBN 9788080861353 (brož.).
3. Web, Multimédiá / Martin Homola ... [et al.]. - Bratislava : Štátny pedagogický ústav, 2010. - 68 s. - Č. projektu: ŠPVV ĎVUi 26120130001. - ISBN 9788081180514 (brož.).

**Course language:**

| | |
|---|---|
| **Notes:**<br>Content of lessons will be flexibly adapted to the field of study of learners. Language learners will be able to work more with pictures and sounds, physicists with simulation programs, mathematicians with mathematical software, etc. | |

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

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 28.57 | 28.57 | 28.57 | 0.0 | 14.29 | 0.0 |

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

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| **Faculty:** Faculty of Science |
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| **Course ID:** ÚGE/ AGS/08 | **Course name:** English geographical 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., II.

**Prerequisities:**

**Conditions for course completion:**
 test

**Learning outcomes:**
 The aim is to get students to work with the current language of geographers. The focus will primarily be on vocabulary of common geographical issues as geography of Europe, geography of the Slovak Republic, travel and tourism, project related English and some business English. Selected issues concerning the oral and written form of communication will be practised.

**Brief outline of the course:**
 The subject aims to cover the most relevant issues of Human geography of Europe. Students actively participate on volunary chosen topics: political division of Europe, population and settlements, main trends in economy of Europe, geographical description of European subregions or particular model national state.

**Recommended literature:**
 Cihová, J. a kol., 2005: English for Students of Public Administration, Regional Development, European Integration. Bratislava: Geografika. ISBN 80-969338-2-5.
 Clark, A. N., 1998: Dictionary of Geography. Second edition. Penguin Books. ISBN 0-14-051388-4
 Daniels, P., et al. 2005. An Introduction to Human Geography. Issues for the 21st Century. Pearson: Prentice Hall. ISBN 0-13-121766-6
 Jordan, R.R., 1980: Academic Writing Course. London: Collins ELT. ISBN 0-00-370004-6
 Swan, M., 2006: Practical English Usage. Oxford: OUP. ISBN 9780194420983
 materials provided by the teacher

**Course language:**

**Notes:**

| Course assessment | | | | | |
|---|---|---|---|---|---|
| Total number of assessed students: 26 | | | | | |
| A | B | C | D | E | FX |
| 65.38 | 3.85 | 3.85 | 15.38 | 11.54 | 0.0 |

**Provides:** RNDr. Stela Csachová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

| University: P. J. Šafárik University in Košice |
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| Faculty: Faculty of Science |
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| 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:**
Active participation in class and completed homework assignments. Students are allowed to miss 2 classes at the most.
Continuous assessment: 2 credit tests (presumably in weeks 6 and 13) and academic presentation in English.
Test 1 = 40 points, test 2 = 40 points, presentation = 20 points.
In order to be admitted to the final exam, a student has to score at least 65 points as a sum of both credit tests and academic presentation.
Exam test = 100 points.
The exam test results represent 50% of the final grade for the course, continuous assessment results represent the other 50% of the final grade.
The final grade for the course will be calculated as follows:
A 93-100, B 86-92, C 79-85, D 72-78, E 65-71, FX 64 and less.

**Learning outcomes:**
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<br>Velebná, V. English for Chemists.<br>Redman, S.: English Vocabulary in Use, Pre-intermetdiate, Intermediate. Cambridge University Press. 2003.<br>Powel, M.: Dynamic Presentations. CUP, 2010<br>Armer, T.: Cambridge English for Scientists. CUP, 2011<br>Wharton J.: Academic Encounters. The Natural World, CUP: 2009.<br>Murphy, R.: English Grammar in Use. Cambridge University Press. 1994.<br>Redman, s.: English Vocabulary in Use, Pre-intermetdiate, Intermediate. Cambridge University Press. 2003.<br>P. Fitzgerald : English for ICT studies, Garnet Publishing, 2011 |

| **Course language:** |
|---|

| **Notes:** |
|---|

**Course assessment**
Total number of assessed students: 2010

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 31.44 | 25.82 | 18.71 | 11.59 | 9.65 | 2.79 |

**Provides:** PaedDr. Gabriela Bednáriková, Mgr. Marianna Škultétyová, Mgr. Zuzana Naďová, PhDr. Helena Petruňová, CSc.

**Date of last modification:** 01.09.2016

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ GEP2/13 | **Course name:** Fundamentals of Geology for Geographers |
|---|---|

**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:** 7

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**
Courses have following objectives: firstly, to introduce the current theories of processes which occur in the Earth (global tectonics, species of magmatism), secondly, to describe the rock-forming minerals, taxology of intrusive rocks, taxology of sedimentary rocks and rocks which had overcame metamorphosis, basics of the regional geology of Slovakia, basics of the historical geology and paleontology.

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 856

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 7.71 | 14.84 | 31.54 | 27.69 | 12.73 | 5.49 |

**Provides:** doc. RNDr. Zdenko Hochmuth, CSc., Ing. Katarína Bónová, PhD., Mgr. Veronika Straková

**Date of last modification:** 08.09.2016

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice |
|---|

| Faculty: Faculty of Science |
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| Course ID: ÚGE/ GEE2/07 | Course name: Geoecology |
|---|---|

**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:**

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**
Focus will be put on the development of this discipline, different dimensions of the physical – geographic complexes, regularities of the space differentiation of the physical – geographic sphere, evolution, and dynamics of the physical – geographic complexes. Synthesis of the principles of landscape and landscape-ecological planning.

**Recommended literature:**
BEDRNA, Z., a kol. 1992: Analýza a čiastkové syntézy zložiek krajinnej štruktúry. Bratislava. Učebné texty, 95 s..
MIČIAN, Ľ., ZATKALÍK, F. 1984: Náuka o krajine a starostlivosť o životné prostredie. UK Bratislava skriptá,137s.
MIČIAN, Ľ. 1989: Pokus o novú definíciu krajinnej ekológie. Ekológia (ČSFR), 3,1,Veda, Bratislava, s. 7-12.
MIČIAN, Ľ. 2008: Všeobecná geoekológia. Bratislava: Geo-grafika, 88 s. – Skriptá.

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 603

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 4.98 | 12.94 | 20.4 | 24.38 | 34.99 | 2.32 |

**Provides:** doc. RNDr. Zdenko Hochmuth, CSc., RNDr. Dušan Barabas, CSc., Mgr. Veronika Straková

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ GIS/15 | **Course name:** Geographic Information Systems |
|---|---|

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

**Number of credits:** 6

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

**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: 254

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 32.28 | 22.44 | 27.95 | 10.63 | 6.69 | 0.0 |

**Provides:** prof. Mgr. Jaroslav Hofierka, PhD., Mgr. Michal Gallay, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice |
|---|

| Faculty: Faculty of Science |
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| Course ID: ÚGE/ GEOM/15 | Course name: Geography |
|---|---|

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

| Number of credits: 1 |
|---|

| Recommended semester/trimester of the course: |
|---|

| Course level: 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: 27

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 11.11 | 29.63 | 25.93 | 14.81 | 18.52 | 0.0 |

| Provides: |
|---|

| Date of last modification: 26.02.2016 |
|---|

| Approved: doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |
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# COURSE INFORMATION LETTER

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

| Course ID: ÚGE/ MG/14 | Course name: Geography of mining |
|---|---|

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

| **Number of credits:** 3 |
|---|

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

| **Course level:** I. |
|---|

| **Prerequisities:** |
|---|

| **Conditions for course completion:** The evaluation is based on a combination of continuous and final control. The continuous control is carried out during the teaching part by written test with a share of 30 % of the final evaluation. The final control is written and constitutes 70 % of the final evaluation. The resulting evaluation is a weighted average of the continuous (30 %) and final (70 %) controls. Credits will be awarded only to student who achieves the evaluation at the minimum level of the mark E in every part of the evaluation. |
|---|

| **Learning outcomes:** To acquaint students with basic facts and knowledge of the history of mining science from the view of geographic aspect to obtain information overview of the history of world and Slovak mining for geographic purposes. |
|---|

| **Brief outline of the course:** Historical foundations of the global mining industry, mining oldest written records of mining heyday in the Middle Ages, the first mining maps, Slovak ore mining in the Austro-Hungarian Empire, First World Mining Academy in Banská Štiavnica mining and migration of the population, the world "gold rush", salt roads Europe, coal mining and electrification of industry, environmental consequences of mining devastation, mining open-air museums in Slovakia and Europe and their importance for the promotion of tourism. |
|---|

| **Recommended literature:** Odporúčaná literatúra: Ježek, B. a Hummel, J., 2006: Georgius Agricola, Dvanásť kníh o baníctve a hutníctve. Preklad z českého originálu: Petr, K. a Petrová, M., Ostrava: Montanex a.s., 2006, 546s., ISBN 80-7225-218-6. Puzder, J., 2000: Samuel Mikovíni, život a dielo. Košice: FBERG TU Košice, 115s. Vozár, J., 2000: Zlatá kniha baníctva. Košice: Tibor Turčan/Banská agentúra, 2000, 263s., ISBN 80-968421-4-5. Vozár, J., 2002: Kódex mestského a banského práva Banskej Štiavnice. Košice: Tibor Turčan/ Banská agentúra, 2002, 71s., ISBN 80-968621-2-X. |
|---|

Zícha, Z., 2005: Back to the past. The history of technology and manpower in the mining is a legacy which cannot be forgotten. Ústí nad Labem: CDL Design s.r.o., 2005, 98p., ISBN 80-902278-9-9.

**Course language:**
Slovak

**Notes:**
without notices

**Course assessment**
Total number of assessed students: 37

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 54.05 | 32.43 | 2.7 | 8.11 | 2.7 | 0.0 |

**Provides:** prof. Ing. Vladimír Sedlák, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

## COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice |
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| Faculty: Faculty of Science |
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| Course ID: ÚGE/ OBY2/03 | Course name: Geography of population and settlements |
|---|---|

**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.

**Prerequisities:**

**Conditions for course completion:**
Evaluation of student performance is carried out by combining ongoing review during the term of examination for the period of the semester. Continuous control consists of min. 80 % of the active participation of students in teaching and successfully solving assignments. If a student does not reach required active participation of teaching and successfully does not solve the given problem can not log on to the test.

**Learning outcomes:**
The student will acquire theoretical and methodological basis of Geography of Population and Settlements. Students will acquire a basic spatial differentiation of population and settlements in the world according to basic characteristics.

**Brief outline of the course:**
Population geography as a science discipline; Trends and forecasts of the world population; Distribution of population; Natural and mechanical movement of population (natality, mortality, balance natural movement of the population, model of demographic cycle, population migration); Population structure on the basis of biological, cultural and economic characteristics;
Geography settlements as a scientific discipline; Settlement development and settlement systems; Geographical location of settlements; The structure of settlements by size, dynamics and morphology; Urban geography (definition of city, creation of city and functions cities); The hierarchy of settlements and Gravity; Urbanization (basic concepts, indicators, aspects and methods of research); Rural settlement systems (compact and scattered rural settlements and their geographical interpretation).
Seminars
Seminars during the semester are oriented to problem solving in order to practice, resp. demonstrate phenomena studied in different regional units of Slovakia, Europe or Worldwide.

**Recommended literature:**
BAŠOVSKÝ, O., MLÁDEK, J. 1989: Geografia obyvateľstva a sídel. Prírodovedecká fakulta UK, Bratislava, 221.
CHALUPA, P., TARABOVÁ, Z. 1990: Geografie obyvatelstva, demografie, geografie sídel. MU, Brno.

MATLOVIČ, R. 2001: Geografia relígií. Fakulta humanitných a prírodných vied Prešovskej univerzity v Prešove. Prešov, 375.

MLÁDEK, J. 1992: Základy geografie obyvateľstva. SPN Bratislava, 230.

MLÁDEK, J. a kol. 2006: Atlas obyvateľstva Slovenska. UK Bratislava, 168.

MLÁDEK, J., KUSENDOVÁ, D., MARENČÁKOVÁ, J., PODOLÁK, P., VAŇO, B. 2006: Demogeografická analýza Slovenska. UK Bratislava, 222.

PAVLÍK, Z., RYCHTAŘÍKOVÁ, J., ŠUBRTOVÁ, A. 1986: Základy demografie. Academia Praha.

VOTRUBEC, C. 1980: Lidská sídla, jejich typy a rozmístnění ve světe. Academia Praha.

SHORT, J. R. 1994: Lidská sídla. Velká geografická encyklopedie světa. Nakladatelský dům OP Praha

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 591

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 9.48 | 14.21 | 22.67 | 23.52 | 26.57 | 3.55 |

**Provides:** prof. RNDr. Peter Spišiak, CSc., RNDr. Janetta Nestorová-Dická, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** ÚGE/ GVS/15 | **Course name:** Geography of Public Administration |
|---|---|

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

**Number of credits:** 3

**Recommended semester/trimester of the course:** 5.

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

**Prerequisities:**

**Conditions for course completion:**
 active participation, works during semester, final test. The student is awarded a grade provided they attend the classes regularly, submit and present the seminar work and write a final test with a value 50 % at least - grade E.

**Learning outcomes:**

**Brief outline of the course:**
 public administration, systems and models of public administration, history of public administration on the territory of Slovakia, division of public administration - state government, self-government - local and regional, local economic development, financial aspects of local administative untis, local government reform, intermunicipal reform, the city of Košice , territorial-administrative division, system of public administration in model states.

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 171

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 23.98 | 33.33 | 18.13 | 15.2 | 8.77 | 0.58 |

**Provides:** prof. RNDr. Peter Spišiak, CSc., RNDr. Stela Csachová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ GEX1/07 | **Course name:** Geological excursion |
|---|---|

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

**Number of credits:** 2

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**
 Visiting of different localities in the Western Carpathian tectonic units - Flysh belt, Klippen belt, Central Western Carpathians. Visiting of several localities of mining in Slovakia and getting to know the process of manufacturing of the rocks.

**Recommended literature:**
 Regionálne geologické mapy Slovenska (1:50 000) + Vysvetlivky.
 ŽEC, B. et al., 2005: Exkurzný sprievodca ku kongresu Slovenskej geologickej spoločnosti Zemplínska šírava - Medvedia hora. CompuGraph, Košice, 138s.
 BIELY, A. et al., 1996: Geologická mapa Slovenska, 1 : 500 000. MŽP SR, ŠGÚDŠ, Bratislava.
 MIŠÍK, M., 1976: Geologické exkurzie po Slovensku. SPN Bratislava, 276 s.
 NĚMEC, F., 1987: Kľúč na určovanie nerastov a hornín. SPN Bratislava, 240 s.
 PELLANT, CH., PELLANTOVÁ, H., 1994: Horniny a minerály. Osveta, Martin, 256 s.

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 257

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 79.77 | 13.62 | 3.5 | 0.0 | 0.0 | 3.11 |

**Provides:** doc. RNDr. Zdenko Hochmuth, CSc., Ing. Katarína Bónová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ GEO2a/15 | **Course name:** Geometry I |
|---|---|

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

**Number of credits:** 5

**Recommended semester/trimester of the course:** 6.

**Course level:** I.

**Prerequisities:**

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

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

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

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

4. M.Trenkler: Materiály uvedené na Internete.

| **Course language:** |
| --- |
| Slovak |

| **Notes:** |
| --- |

**Course assessment**
Total number of assessed students: 88

| A | B | C | D | E | FX |
| --- | --- | --- | --- | --- | --- |
| 17.05 | 12.5 | 21.59 | 18.18 | 19.32 | 11.36 |

**Provides:** doc. RNDr. Dušan Šveda, CSc., Mgr. Lucia Janičková

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ GEM2/05 | **Course name:** Geomorphology |
|---|---|

**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:** 7

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 1025

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 8.39 | 20.98 | 20.0 | 16.2 | 22.83 | 11.61 |

**Provides:** doc. RNDr. Zdenko Hochmuth, CSc., RNDr. Alena Gessert, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ NGS/06 | **Course name:** German geographical seminar |
|---|---|

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

**Number of credits:** 2

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

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

**Prerequisities:**

**Conditions for course completion:**
On the basis of part-time works, 5 in total (á 20 points), the student will receive the end evaluation of the subject. For each work he should aquire minimal 11 points, so 55 points in total.

**Learning outcomes:**
After the subject attendance the student should be able to communicate with proffesional german terminology in writing and oral presentation.

**Brief outline of the course:**
The academic geographical terminology on particular topics of physical and human geography will be concerned. The world professionals of geography in the past and present. The system of university studies in Germany, German geographical periodicals, monographs. Geography of Germany.

**Recommended literature:**
BAUER, J., ENGLERT, W., MEIER, U., MORGENEYER, F., WALDECK, W., 2002: Physische Geographie kompakt. Spektrum Akademischer Verlag Heidelberg. 192 s.
HOLLERBACH, E., NESS, N., 2002: Rhein- von Mainz bis Koeln. Rahmel - VerlagGmbH, Pulheim. 96 s.
KOLEKTIV, 2004: Deutschland. Verlag Karl Baedecker Ostfildern. 1182 s.
KUBALLA, S., 2001: Unbekanntes Deutschland. ADAC Verlag GmbH Munchen. 432 s.
STRAHLER, H.A., STRAHLER, N.A., 1999: Physische Geographie. Verlag Eugen Ulmer Stuttgart. 294 s.
ZEPP, H., MÜLLER, M.J., 1999: Landschaftsökologie Erfassungsstandards. Flensburg. 312 s.

**Course language:**
slovak, german

**Notes:**

| **Course assessment** | | | | | |
| --- | --- | --- | --- | --- | --- |
| Total number of assessed students: 14 | | | | | |
| A | B | C | D | E | FX |
| 64.29 | 21.43 | 0.0 | 0.0 | 7.14 | 7.14 |

**Provides:** RNDr. Alena Gessert, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice | |
|---|---|
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚGE/ GNG/15 | **Course name:** Graphic tools in geography |

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

**Number of credits:** 3

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
During the semester, students will need to hand in the outputs of the practicals. The resulting assessment is based on the final practical skills verification and delivery of the outputs of practicals. From the practical skills verification, students must obtain at least 90 points to get the A mark, at least 80 points to get B, at least 70 points to get C, at least 60 points to get D, at least 50 points to get E. The credits shall not be granted to a student who does not hand in one or more outputs of the practicals or he/she will get less than 50 points out of 100.

**Learning outcomes:**
The main learning outcomes include practical skills mainly in software COREL Graphics Suite focusing on procces vector and raster data to produce and edit map layouts, pictures using in geograpfhical research and teaching geography.

**Brief outline of the course:**
Introduction to the exercises, criteria of assessment, recommended literature, explanation of the main principle of vector and raster graphics, graphic formats (JPG, TIF, BMP, PNG), adjustment of the image size. Raster graphics: joining of maps into a single unit. Raster graphics: drawing, text editing. Image Adjustment for publication, fill in missing picture elements, working with a mask, retouch. Vector graphics: manual vectorization of raster background (selected municipalities map of the district), curves and areas, tools Bezier tool, functions, Weld, Trim. Vector graphics: cartogram creation of cartodiagrams and graphical scale for the selected district, tools Basic shapes, Bezier tool, Align. Vector graphics: vector formats, edit existing vector background, creating cartograms. Vector graphics: manual vectorization of raster surface (topographic map with contour lines), zhladzovanie curves show qualitative phenomena.

**Recommended literature:**
KADAVÝ, D., PÍRKOVÁ, K. 2008: CorelDRAW X4: Podrobná uživatelská příručka. Praha (Computer Press).
CORELDRAWTIPS 2013: Corel Draw Tips. http://coreldrawtips.com/site/coreldraw-tutorials
COREL 2013: CorelDRAW Graphics Suite Tutorials:http://www.corel.com/corel/pages/ index.jsp?pgid=800382&storeKey=ca&languageCode=en

**Course language:**

| Notes: | | | | | |
|---|---|---|---|---|---|
| **Course assessment**<br>Total number of assessed students: 126 | | | | | |
| A | B | C | D | E | FX |
| 81.75 | 12.7 | 3.17 | 2.38 | 0.0 | 0.0 |
| **Provides:** Mgr. Michal Gallay, PhD., RNDr. Ján Kaňuk, PhD. | | | | | |
| **Date of last modification:** 03.05.2015 | | | | | |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. | | | | | |

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** KFaDF/ DF2p/03 | **Course name:** History of Philosophy 2 (General Introduction) |
|---|---|

**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., 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: 731

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 60.6 | 13.82 | 12.72 | 8.76 | 3.42 | 0.68 |

**Provides:** doc. PhDr. Pavol Tholt, PhD., mim. prof., Doc. PhDr. Peter Nezník, CSc., PhDr. Katarína Mayerová, PhD., Mgr. Róbert Stojka, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** ÚGE/ HUGN/15 | **Course name:** Human geography (Non-production Systems) |
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**Course type, scope and the method:**
 **Course type:** Lecture / Practice
 **Recommended course-load (hours):**
 **Per week:** 2 / 1 **Per study period:** 28 / 14
 **Course method:** present

**Number of credits:** 3

**Recommended semester/trimester of the course:** 5.

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**
 BOROVSKÝ, J. a kol., 2008: Cestovný ruch, trendy a perspektívy. Iura Edition, 280 s.
 HALÁS, M., 2000: Zahraničný obchod SR s ČR. Geographical Studies 7, Constantine the Philosopher University Nitra, s. 98-107.
 HALL, C.M. - PAGE, S.J. 2002: The geography of tourism and recreation, 2. edition, London and New York, 399 p.
 HAVRLANT, J., 2007: Geografie cestovního ruchu I. Základy geografie cestovního ruchu, Ostravská univerzita, 41 s.
 MARIOT, P., 1983: Geografia cestovného ruchu. Veda, Bratislava, 224 s.
 OTRUBOVÁ, E., 2003: Humánna geografia II (Geografia zahraničného obchodu, Geografia cestovného ruchu). Prírodovedecká fakulta UPJŠ, Košice, 105 s.
 ŠTEPÁNEK, KOPAČKA, ŠÍP, 2001: Geografie cestovního ruchu, Vydalo Karolinum Praha, 228s.

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 333

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 16.22 | 22.82 | 26.73 | 22.22 | 11.41 | 0.6 |

**Provides:** Mgr. Marián Kulla, PhD., prof. RNDr. Peter Spišiak, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice | | |
|---|---|---|
| **Faculty:** Faculty of Science | | |
| **Course ID:** ÚGE/ HUG2a/05 | **Course name:** Human geography (productive sphere) | |

**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:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**
Location theories, factors and methods of industry evaluation. Territorial industrial units and regionalisation of the industry in Slovakia. Geographical characteristics of selected types of industry. Relationship of industry and environment. Trends in development and problems of the world economy. Development of agriculture and regularities of distribution of agricultural lands. The agricultural countries and their typology. The land use map. Geography of forests and its typology.

**Recommended literature:**
FALKOWSKI, J., KOSTROWICKI, J., 2001: Geografia rolnictwa świata. PWN, Warszawa, 516 p.
KNOX, P., L., et al. 2010: Human geography. Places and regions in Global Context. pearson International Edition., 513 p.
KOREC, P. 1994: Humánna geografia 1. Prírodovedecká fakulta, Univerzita Komenského, Bratislava, 120 s.
MIRVALD, S., 2002: Geografie dopravy II. ZČU Plzeň, 56 s.
MIRVALD, S., 2002: Geografie dopravy III. ZČU Plzeň, 43 s.
POPJAKOVÁ, D., 1997: Základné kapitoly z geografie priemyslu, Prešov: PU, 144 s.
SPIŠIAK, P., 2005: Základy geografie poľnohospodárstva a lesného hospodárstva. Prírodovedecká fakulta, Univerzita Komenského, Bratislava. 140 s.
TOUŠEK, V. a kol., 2008: Ekonomická a sociální geografie, Plzeň, 2008, 411 s.

**Course language:**

**Notes:**

| Course assessment | | | | | |
|---|---|---|---|---|---|
| Total number of assessed students: 516 | | | | | |
| A | B | C | D | E | FX |
| 7.75 | 23.84 | 29.84 | 25.97 | 10.85 | 1.74 |

**Provides:** prof. RNDr. Peter Spišiak, CSc., Mgr. Marián Kulla, PhD.

**Date of last modification:** 18.02.2016

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ EXHG1/15 | **Course name:** Human Geography Excursion |
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**Course type, scope and the method:**
  **Course type:** Practice
  **Recommended course-load (hours):**
  **Per week:  Per study period:** 6d
  **Course method:** present

**Number of credits:** 3

**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: 537

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 86.59 | 7.08 | 3.91 | 0.56 | 0.93 | 0.93 |

**Provides:** prof. RNDr. Peter Spišiak, CSc., RNDr. Stela Csachová, PhD., Mgr. Marián Kulla, PhD., Mgr. Ladislav Novotný, PhD., RNDr. Janetta Nestorová-Dická, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** ÚGE/ HGS/15 | **Course name:** Human Geography of Slovakia |
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| **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 |

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| **Number of credits:** 5 |

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| **Recommended semester/trimester of the course:** 6. |

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| **Course level:** I. |

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| **Prerequisities:** |

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| **Conditions for course completion:** |

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| **Learning outcomes:** |

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| **Brief outline of the course:** |

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| **Recommended literature:** |

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| **Course language:** |

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| **Notes:** |

**Course assessment**
Total number of assessed students: 291

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 3.44 | 8.59 | 16.49 | 36.43 | 29.55 | 5.5 |

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| **Provides:** prof. RNDr. Peter Spišiak, CSc., Mgr. Marián Kulla, PhD., RNDr. Janetta Nestorová-Dická, PhD. |

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| **Date of last modification:** 03.05.2015 |

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| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** ÚGE/ MGS/06 | **Course name:** Hungarian geographical seminar |
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| **Course type, scope and the method:** |
| **Course type:** Practice |
| **Recommended course-load (hours):** |
| **Per week:** 2 **Per study period:** 28 |
| **Course method:** present |

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| **Number of credits:** 2 |

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| **Recommended semester/trimester of the course:** 5. |

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| **Course level:** I. |

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| **Prerequisities:** |

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| **Conditions for course completion:** |

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| **Learning outcomes:** |

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| **Brief outline of the course:** |
| Hungarian geographical terminology on particular topics in geology, geomorhpology, climatology, hydrography, pedogeography, biogeography. The professionals from the past in Hungary, the system of universty studies in Hungary. Hungarian gegraphical periodicals, monographs. |

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| **Recommended literature:** |

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| **Course language:** |

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| **Notes:** |

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| **Course assessment** |
| Total number of assessed students: 12 |

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

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| **Provides:** prof. PhDr. Ladislav Tajták, PhD. |

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| **Date of last modification:** 03.05.2015 |

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| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science | |

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| **Course ID:** ÚMV/ IPU/10 | **Course name:** Informatics course for teachers of mathematics |

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 6.

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
Elaborating test by using a computer. Solving problems of worksheet and elaboration of seminar work.

**Learning outcomes:**
To develop the students' knowledge and skills in the basics of working with standard ICT, which provide opportunities for their use in mathematics education. To teach students to use the basic commands of Logo language for writing and generalization algorithms for constructing geometric shapes and basic principles of creation of constructions in the environment of dynamic geometry. To develop creative and evaluative students' ability to allow meaningful integration of modern technologies in mathematics education.

**Brief outline of the course:**
Basics of development of algorithms in Logo. Basics of working in the dynamic geometry environment. Educational applications and Internet in mathematics education. Use of numerical and graphical representations of data and modelling in the spreadsheet environment.

**Recommended literature:**
B. Brdička: The Role of Internetu in Education, 2003, http://it.pedf.cuni.cz/~bobr/role/econt.htm.
S. Lukáč a kol.: IKT vo vyučovaní matematiky, Asociácia projektu Infovek 2002.
M. Černochová a kol.: Využití počítače při vyučování. Portál, 1998.
Z. Šťastný: Matematické a statistické výpočty v Microsoft Excelu, Computer Press 2001.

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 138

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 54.35 | 26.81 | 9.42 | 7.25 | 2.17 | 0.0 |

**Provides:** doc. RNDr. Stanislav Lukáč, PhD.

| **Date of last modification:** 03.05.2015 |
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| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

| **University:** P. J. Šafárik University in Košice |
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| **Faculty:** Faculty of Science |
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| **Course ID:** ÚMV/ UAD/10 | **Course name:** Introduction to data analysis |
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**Course type, scope and the method:**
 **Course type:** Lecture / Practice
 **Recommended course-load (hours):**
 **Per week:** 1 / 1 **Per study period:** 14 / 14
 **Course method:** present

**Number of credits:** 2

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

**Course level:** I.

**Prerequisities:**

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

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

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

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

**Course language:**
 Slovak

**Notes:**

**Course assessment**
 Total number of assessed students: 220

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 30.0 | 26.82 | 32.27 | 10.45 | 0.0 | 0.45 |

**Provides:** doc. RNDr. Ivan Žežula, CSc., RNDr. Martina Hančová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

**Faculty:** Faculty of Science

| **Course ID:** ÚGE/ UGE/15 | **Course name:** Introduction to Geography |
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**Course type, scope and the method:**
 **Course type:** Lecture / Practice
 **Recommended course-load (hours):**
 **Per week:** 1 / 1 **Per study period:** 14 / 14
 **Course method:** present

**Number of credits:** 3

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
Participation in exercises, successfully processed award, graduation the final test. Credits will not be awarded to students, who will not have successfully processed award and does not pass the final test min. to 60%.

**Learning outcomes:**
Students profit a basic orientation in the position and structure of the department, current development trends and literature. Students will create a comprehensive picture of discovering Earth and the gradual development of geography from the earliest times to the present in the context of the most important personalities and milestones of development. Students profit a basic information about the personality of Geography and applications of geography into practice.

**Brief outline of the course:**
Home geographic discipline is to provide students a basic orientation – object Geography, subject Geography, Landscape sphere of the Earth, System of geographic sciences (Haggett model, Demko model, model of Mičian, Lauko model), application geographic knowledge into practice, development of geographic thought (Period before Antik - oldest maps, market, strategic importance of geographic information, Ancient period - Greek geography, cosmological ideas - Roman geography, new cartographic methods, Mediaeval period - Arab geography, market, belief, cartography, compass, Period of large geographic discoveries - rediscovery of America, Around the World, Australia, Antarctica, Northern sea way), personality Geography (Humboldt, Ritter, Hetner, Bel, Hromádka, Lukniš), Human Geography, Regional Geography (basic theories and their representatives), Hettner School, use geography in practice.

**Recommended literature:**
RIEDLOVÁ, M., DEMEK, J., PECH, J. 1980: Úvod do studia geografie, dějiny geografie. Praha, SPN, 158 s.
DEMEK, J. 1987: Úvod do štúdia teoretickej geografie. Bratislava, SPN. 241 s.
KVITKOVIČ, J. 2000: Alexander von Humbolt - priekopník modernej geografie. Geografia, 8, 2, 73-78 s.
LUKNIŠ, M. 1987: prof. Ján Hromádka ako vedec, pedagóg a človek. Geografický časopis, 38, 2-3, 118-125 s.
TIBENSKÝ, J. a kol. 1987: Matej Bel - doba, život, dielo. Bratislava, Vyd. VEDA. 411 s.

| Course language: |
| --- |
| Slovak |

| Notes: |
| --- |

**Course assessment**
Total number of assessed students: 759

| A | B | C | D | E | FX |
| --- | --- | --- | --- | --- | --- |
| 9.09 | 11.46 | 27.54 | 26.61 | 23.72 | 1.58 |

**Provides:** prof. Mgr. Jaroslav Hofierka, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice |
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| Faculty: Faculty of Science |
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| 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: 373 | | | | | |
| A | B | C | D | E | FX |
| 22.79 | 12.06 | 16.89 | 15.82 | 19.3 | 13.14 |

**Provides:** doc. RNDr. Matúš Harminc, CSc., Mgr. Lucia Janičková, Mgr. Tadeáš Gavala, RNDr. Veronika Hubeňáková, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

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| **Course ID:** Dek. PF UPJŠ/USPV/13 | **Course name:** Introduction to Study of Sciences |

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| **Course type, scope and the method:**<br> **Course type:** Lecture / Practice<br> **Recommended course-load (hours):**<br> **Per week: Per study period:** 12s / 3d<br> **Course method:** present |

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| **Number of credits:** 2 |

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

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| **Course level:** I. |

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| **Prerequisities:** |

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| **Conditions for course completion:** |

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| **Learning outcomes:** |

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| **Brief outline of the course:** |

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| **Recommended literature:** |

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| **Course language:** |

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| **Notes:** |

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| **Course assessment**<br> Total number of assessed students: 733 |

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| 96.32 | 3.68 |

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| **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. |

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| **Date of last modification:** 03.05.2015 |

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| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

**Faculty:** Faculty of Science

| **Course ID:** ÚGE/ KVA/15 | **Course name:** Landscape in the Quarternary |
|---|---|

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

**Number of credits:** 4

**Recommended semester/trimester of the course:** 5.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 256

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 46.88 | 30.08 | 14.45 | 6.64 | 1.95 | 0.0 |

**Provides:** doc. RNDr. Zdenko Hochmuth, CSc., Ing. Katarína Bónová, PhD.

**Date of last modification:** 08.09.2016

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ LCO/10 | **Course name:** Linear and integer programming |
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**Course type, scope and the method:**
 **Course type:** Lecture / Practice
 **Recommended course-load (hours):**
 **Per week:** 2 / 2 **Per study period:** 28 / 28
 **Course method:** present

**Number of credits:** 5

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

**Course level:** 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: 130

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 21.54 | 13.08 | 22.31 | 21.54 | 20.77 | 0.77 |

**Provides:** doc. RNDr. Roman Soták, PhD., Mgr. Andrej Gajdoš

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice |
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| Faculty: Faculty of Science |
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| 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. |
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| 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: 509

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 12.57 | 16.11 | 20.04 | 24.75 | 15.91 | 10.61 |

| Provides: RNDr. Jaroslav Šupina, PhD. |
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| Date of last modification: 03.05.2015 |
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| Approved: doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |
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**COURSE INFORMATION LETTER**

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

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|---|---|
| **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.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **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: 1287

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 6.22 | 7.69 | 12.12 | 13.36 | 34.73 | 25.87 |

**Provides:** doc. RNDr. Ondrej Hutník, PhD., RNDr. Lenka Halčinová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **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: 811

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 8.38 | 8.26 | 12.21 | 18.74 | 36.25 | 16.15 |

**Provides:** doc. RNDr. Ondrej Hutník, PhD., RNDr. Lenka Halčinová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ MAN2c/10 | **Course name:** Mathematical analysis III |
|---|---|

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

**Number of credits:** 5

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

**Course level:** I.

**Prerequisities:** ÚMV/MANb/10

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

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

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

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

**Course language:**
Slovak

**Notes:**

| Course assessment | | | | | |
|---|---|---|---|---|---|
| Total number of assessed students: 620 | | | | | |
| A | B | C | D | E | FX |
| 7.1 | 6.77 | 12.58 | 18.39 | 43.23 | 11.94 |

**Provides:** doc. RNDr. Ondrej Hutník, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **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:**

**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: 212

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 3.77 | 4.72 | 13.68 | 22.64 | 42.45 | 12.74 |

**Provides:** prof. RNDr. Jozef Doboš, CSc., RNDr. Jaroslav Šupina, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

**Faculty:** Faculty of Science

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

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

**Number of credits:** 5

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

**Course level:** I.

**Prerequisities:** ÚMV/MANb/10

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

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

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

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

**Course language:**
Slovak

**Notes:**

| Course assessment | | | | | |
|---|---|---|---|---|---|
| Total number of assessed students: 282 | | | | | |
| A | B | C | D | E | FX |
| 8.51 | 9.57 | 17.73 | 19.86 | 34.75 | 9.57 |

**Provides:** RNDr. Lenka Halčinová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| **Faculty:** Faculty of Science |
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| **Course ID:** ÚMV/ MRUa/15 | **Course name:** Mathematical problem solving strategies I |
|---|---|

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

**Number of credits:** 2

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
Evaluation will be awarded on the basis of continuous assessment and final test.

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

**Brief outline of the course:**
Basic knowledge of school mathematics, different strategy of problem solution, problems from mathematical competitions concerning Equations and inequalities and their systems, Functions, Financial Mathematics.

**Recommended literature:**
[1] Hejný, M. a kol., Teória vyučovania matematiky 2. SPN, Bratislava 1989 (in Slovak)
[2] Kopka, J., Hrozny problémů ve školské matematice, Univerzita J. E. Purkyně, Ústí nad Labem 1999 (in Czech)
[3] Učebnice a zbierky úloh z matematiky ZŠ a SŠ (in Slovak)

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 121

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 31.4 | 23.97 | 23.14 | 11.57 | 9.09 | 0.83 |

**Provides:** doc. RNDr. Stanislav Lukáč, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

## COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ MRUb/15 | **Course name:** Mathematical problem solving strategies II |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 5.

**Course level:** I.

**Prerequisities:** ÚMV/MRUa/15

**Conditions for course completion:**
 The award is based on the results of written checks carried out during the semester.
 The resulting trial is granted on the basis of continuous assessment and seminar work.

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

**Brief outline of the course:**
 Basic knowledge of school mathematics, various methods for the task, the role of mathematical competitions for thematic units Planimetry, stereometry, goniometery.

**Recommended literature:**
 [1] Hejný, M. a kol., Teória vyučovania matematiky 2. SPN, Bratislava 1989 (in Slovak)
 [2] Kopka, J., Hrozny problémů ve školské matematice, Univerzita J. E. Purkyně, Ústí nad Labem 1999 (in Czech)
 [3] Jonson-Wilder.S., Mason.J.: Developing thinking in Geometry, Sage, 2009
 [4] Učebnice a zbierky úloh z matematiky ZŠ a SŠ

**Course language:**
 Slovak

**Notes:**

**Course assessment**
 Total number of assessed students: 93

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 36.56 | 10.75 | 33.33 | 11.83 | 7.53 | 0.0 |

**Provides:** doc. RNDr. Dušan Šveda, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ MRUc/15 | **Course name:** Mathematical problem solving strategies III |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 6.

**Course level:** I.

**Prerequisities:** ÚMV/MRUb/15

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

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

**Brief outline of the course:**
Basic knowledge of school mathematics, from the topics: combinatorics, probability and statistics.

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

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 97

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 25.77 | 35.05 | 22.68 | 10.31 | 6.19 | 0.0 |

**Provides:** RNDr. Ingrid Semanišinová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ MTM/14 | **Course name:** Mathematics |
|---|---|

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

**Number of credits:** 1

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

**Course level:** I.

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

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

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

**Brief outline of the course:**

**Recommended literature:**

**Course language:**
 Slovak

**Notes:**

**Course assessment**
 Total number of assessed students: 13

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 23.08 | 23.08 | 23.08 | 30.77 | 0.0 | 0.0 |

**Provides:**

**Date of last modification:** 21.05.2016

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, 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: 64

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 26.56 | 18.75 | 20.31 | 20.31 | 12.5 | 1.56 |

**Provides:** prof. RNDr. Katarína Cechlárová, DrSc., RNDr. Veronika Kopčová

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

**COURSE INFORMATION LETTER**

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ MIK/15 | **Course name:** Microgeography |
|---|---|

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

**Number of credits:** 3

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
 Participation in exercises, presentation of seminar topics, graduation the final test. Credits will not be awarded to students, who will not have successfully processed and presented the seminar topic and does not pass the final test min. to 60%.

**Learning outcomes:**
 Ability of synthesis and analysis of selected micro-region for the needs of local government.

**Brief outline of the course:**
 1. The micro-region and the local region in the context of regional taxonomic levels. 2. Theory and Methodology, collection of information (data collection). 3. Differentiation landscape sphere and cultural landscapes of the example chosen region (Location - Geology - Relief - Climate - Rivers - Soils - Flora - Fauna - Population (population dynamics, forecasts, Statistical offices) - Settlements (change in the function of settlements, place in the settlement system, land use map, questionnaires, mapping) - Primary sector - Secondary sector - Tertiary Sector. 4. Regionalization – branch, complex, land use. 5. TUR - MUSES - USES - RUSES. 6. Complex presentation of the research territory at the Municipal Office.

**Recommended literature:**
 DUBCOVÁ, A. a kol. 2012: Mikrogeografia - krajina okolo nás. FPV UKF Nitra, 185 s.
 KANDRÁČOVÁ, V., MICHAELI, E. 1998: Ľubotice. OÚ Ľubotice. 116 s.
 LAUKO, V. 1997: Fyzická geografia Slovenska 1. UK, Bratislava. 148 s.
 LUKNIŠ, M. 1977: Geografia krajiny Jura pri Bratislave. UK, Bratislava. 211 s.
 Základná mapa SR 1: 10 000
 Kolektív, 1977: Vlastivedný slovník obcí na Slovensku diely I-II, Veda Bratislava. 528 s., 519 s.
 Kolektív, 1978: Vlastivedný slovník obcí na Slovensku diely III, Veda Bratislava. 533 s.

**Course language:**
 Slovak

**Notes:**

| Course assessment                                                     |||||| 
| Total number of assessed students: 21                                 |||||| 
| A     | B     | C     | D     | E     | FX    |
|-------|-------|-------|-------|-------|-------|
| 52.38 | 33.33 | 14.29 | 0.0   | 0.0   | 0.0   |

**Provides:** prof. RNDr. Peter Spišiak, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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|---|---|
| **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:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| | |
|---|---|
| **Faculty:** Faculty of Science | |

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

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

**Number of credits:** 3

**Recommended semester/trimester of the course:** 5.

**Course level:** I.

**Prerequisities:** ÚMV/ATC/10

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

**Learning outcomes:**
 To obtain knowledge on quadratic congruences.

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

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

**Course language:**
 Slovak

**Notes:**

**Course assessment**
 Total number of assessed students: 529

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 26.28 | 27.6 | 29.87 | 11.15 | 2.65 | 2.46 |

**Provides:** doc. RNDr. Matúš Harminc, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** KPE/ Pg/15 | **Course name:** Pedagogy |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 3., 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: 67

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 40.3 | 16.42 | 19.4 | 7.46 | 14.93 | 1.49 |

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

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| | |
|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ FYG1/03 | **Course name:** Physical geography 1 |
|---|---|

**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:** 3.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**
 Hydrology of the running water, genesis and development of river basins, measuring of water and its flow. Genesis and the main types of lakes, temperatures, water movements. Sea and water currents, its chemical properties, relief of the sea-floor. Subsurface waters, glaciers.
 In the section of soil science and soil geography, physical and chemical nature of soils will be treated as well as actual and presently used systens of the soil classification. Distribution of different soil types in the world and Slovakia, principles of the soil zonality.

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 590

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 2.37 | 4.07 | 18.64 | 27.8 | 39.32 | 7.8 |

**Provides:** RNDr. Dušan Barabas, CSc., RNDr. Alena Gessert, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|
| **Faculty:** Faculty of Science |

| **Course ID:** ÚGE/ FYG2/05 | **Course name:** Physical geography 2 |
|---|---|

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

| |
|---|
| **Number of credits:** 5 |

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

| |
|---|
| **Course level:** I. |

| |
|---|
| **Prerequisities:** |

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|---|
| **Conditions for course completion:** |

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|---|
| **Learning outcomes:** |

| |
|---|
| **Brief outline of the course:** <br> Atmospheric conditions and their physical origins, general planetary air circulation, most important climatic types and the climate of Slovakia. Measuring of the basic meteorological events will be done by students in the practical part of this course. In the study of biogeography we will focus on the biosphere as a part of the physical-geographic sphere. Further focus will be put on the function and position of organisms on the surface, as well as the main regularities of their distribution throughout the world. Phytogeographical and zoogeographical regions of the world and Slovakia. In the practical part students acquaint with the soil profiles and important kinds of plants in Slovakia. |

| |
|---|
| **Recommended literature:** |

| |
|---|
| **Course language:** |

| |
|---|
| **Notes:** |

**Course assessment**
Total number of assessed students: 548

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 28.83 | 24.82 | 27.37 | 11.13 | 7.3 | 0.55 |

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| **Provides:** doc. RNDr. Zdenko Hochmuth, CSc., RNDr. Alena Gessert, PhD. |

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| **Date of last modification:** 03.05.2015 |

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|---|
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

| | |
|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ EXFG/15 | **Course name:** Physical Geography Excursion |
|---|---|

**Course type, scope and the method:**
  **Course type:** Practice
  **Recommended course-load (hours):**
  **Per week: Per study period:** 6d
  **Course method:** present

**Number of credits:** 3

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 584

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 89.04 | 8.39 | 1.37 | 0.17 | 0.51 | 0.51 |

**Provides:** doc. RNDr. Zdenko Hochmuth, CSc., RNDr. Dušan Barabas, CSc., RNDr. Alena Gessert, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ FGS/15 | **Course name:** Physical Geography of Slovakia |
|---|---|

**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.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 294

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 18.71 | 29.59 | 30.27 | 14.29 | 4.76 | 2.38 |

**Provides:** doc. RNDr. Zdenko Hochmuth, CSc., RNDr. Alena Gessert, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

**Faculty:** Faculty of Science

| **Course ID:** ÚGE/ PLG/15 | **Course name:** Planetary Geography |
|---|---|

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

**Number of credits:** 3

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
The evaluation is based on a combination of the continuous and final control. The continuous control is carried out in the form of tasks on an individual work with a share of 30% of the resultant evaluation. The final control is written and constitutes 70% of the resultant evaluation. The resultant evaluation is a weighted average of the continuous (30%) and final (70%) control. Credits will be awarded only to student who achieves the evaluation at the minimum level of the mark E in every part of the evaluation.

**Learning outcomes:**
The learning result is getting the basics of astronomy and astrophysics in terms of planetary geography.

**Brief outline of the course:**
A brief overview of astronomy. The emergence and development of fundamental knowledge about the Earth and the universe. Space system components and building solar system: origin and evolution of the solar system and solar system objects. Mechanics of the solar system - Kepler's laws of planetary orbits elements, aspects and anomalies, solar system objects. Celestial sphere. Movements of the sun, moon and celestial bodies. Basic data on the Earth. Movements of Earth and their geographical implications. Coordinate systems and basic orientation on the surface. Time and calendar, timing and time zones.

**Recommended literature:**
Andrle, P., 1971: Základy nebeskej mechaniky. Praha: Academia, 1971, 305s.
Brázdil, R.,Mucha, L.,Okáč, Z.,1981: Matematická geografie. Praha: NTL, 1981, 273s.
Brázdil, R. a kol., 1988: Úvod do studia planety Země. Praha: SPN, 1988, 365 s.
Čeman, R, Pittich E., 2005: Vesmír I - Slnečná sústava. Bratislava: MAPA Slovakia, 2005, 383s.
Čapek, R. 1992: Planetární geografie. Praha: Karolinum, Praha, 84s.
Dušek, J., Grigar, J. a Pokorný, Z., 2009: Náš vesmír. Praha: Aventinum, 2009, 255s., ISBN: 9788086858654.
Farndon, J., 2003: 1000 zaujímavostí o vesmíre. Bratislava: Belimex, 2003, 224s., ISBN: 80-89083-33-1.
Ferris, T., 2005: Všetko o vesmíre. Bratislava: Remedium, 2005, 415s., ISBN: 8088993857.
Grego, D., 2011: Neuveriteľný vesmír, Praha: Albatros, 2011, 120s., ISBN: 978-80-00-02818-7.

Hilbert, H., 2001: Vybrané kapitoly z planetárnej geografie. Banká Štiavnica: UMB Fakulta prírodných vied, 2001, 96s.

Hlaváč, Z., 2000: Základy sférické astronomie a nebeské mechaniky, Plzeň: Západočeská univerzita, 2000, ISBN 80-7082-694-0.

Jakeš, P.,1984: Planeta Země. Praha: Mladá fronta, 1984, 416s.

Némethová, J. a Garai, Z., 2008: Zbierka otázok a úloh z planetárnej geografie. Nitra: UKF, 2009, ISBN: 9788080945602.

Astronomická ročenka 2013, 2014, journal, Hurbanovo: Slovenská ústredná hvezdáreň (Slovak Central Observatory).

**Course language:**
Slovak

**Notes:**
without notices

**Course assessment**
Total number of assessed students: 381

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 21.0 | 21.26 | 24.93 | 21.78 | 6.56 | 4.46 |

**Provides:** prof. Ing. Vladimír Sedlák, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| **Faculty:** Faculty of Science |
|---|

| **Course ID:** ÚGE/ PVS/15 | **Course name:** Population growth in Slovakia |
|---|---|

**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:**

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**
The evaluation of student´s performance is implemented through a combination of current, random control during the term and the examination part within a particular period of the semester. This type of continuous control includes at least 80% of students´ active participation in teaching and successful solutions of given assignments. If a student does not follow and fullfil these two conditions, i. e. compulsory active learning part of the course, together with active participation and in addition will not solve assigned tasks successfully cannot register, assign for the examination (oral/written). If the student receives more than 51% in the written form may proceed to the oral form. If a student does not demonstrate particular knowledge during the oral examination student has to take both forms of the examination once again.

**Learning outcomes:**
The Student shall acquires deeper knowledge of the population of Slovakia in terms of time and 3-D.

**Brief outline of the course:**
Development of the population and its spatial differentiation, population Dynamics (natural, migration, the total movement); Reproduction of the population; Migration for work, Foreign and internal migration; The ageing of the population; The specificities of the Roma population in Slovakia; The educational structure of the population; Economic, social, according to the marital status of the population structure; Ethnic and religions structure of the population ; Slovakia in the EU in terms of population processes; The demographic future of Slovakia.
Seminars
Workshops during the semester are focused on filling the solution of tasks in order to practice or demonstrate the phenomena studied in the different regional units.

**Recommended literature:**

**Course language:**

**Notes:**

| Course assessment<br>Total number of assessed students: 102 | | | | | |
|---|---|---|---|---|---|
| A | B | C | D | E | FX |
| 76.47 | 0.98 | 4.9 | 5.88 | 7.84 | 3.92 |

**Provides:** prof. RNDr. Peter Spišiak, CSc., RNDr. Janetta Nestorová-Dická, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|
| **Faculty:** Faculty of Science |

| **Course ID:**<br>KPPaPZ/PP/15 | **Course name:** Positive Psychology |
|---|---|

**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., 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: 14

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 85.71 | 7.14 | 0.0 | 0.0 | 7.14 | 0.0 |

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

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚGE/ HYP/15 | **Course name:** Practical course of Hydrology |
|---|---|

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

**Number of credits:** 3

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

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

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

**Provides:** RNDr. Dušan Barabas, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|
| **Faculty:** Faculty of Science |

| **Course ID:** ÚMV/ PSTa/10 | **Course name:** Probability and statistics I |
|---|---|

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

**Number of credits:** 5

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

**Course level:** I.

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

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

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

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

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

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 283

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 7.42 | 14.49 | 16.25 | 25.09 | 25.09 | 11.66 |

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

| |
|---|
| **Date of last modification:** 03.05.2015 |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

| Course ID: ÚMV/ PSTb/10 | Course name: Probability and statistics 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:**

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

**Prerequisities:**

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

**Learning outcomes:**
To provide a grounding in statistical methods and their applications for real life problems.

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

**Recommended literature:**
1. Skřivánková V.: Probability and statistics, UPJŠ, Košice, 2009.
2. Dekking at al.: A modern Introduction to Probability and Statistics. Springer, 2005.
3. Sincich T.: Statistics by example, Dellen Publishing Company, New Jersey, 1990.

**Course language:**
Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 160

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 18.13 | 21.25 | 19.38 | 24.38 | 11.88 | 5.0 |

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

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** KPPaPZ/Ps/15 | **Course name:** Psychology |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 1., 3., 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: 43

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 4.65 | 6.98 | 37.21 | 25.58 | 9.3 | 16.28 |

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

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| | |
|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** KPPaPZ/PKŽ/15 | **Course name:** Psychology of Everyday Life |
|---|---|

**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:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

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

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 40.63 | 28.13 | 25.0 | 6.25 | 0.0 | 0.0 |

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

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| | |
|---|---|
| **Faculty:** Faculty of Science | |

| | |
|---|---|
| **Course ID:** ÚGE/ RUR/15 | **Course name:** Rural Geography |

**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., 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: 270

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 40.37 | 30.37 | 20.37 | 7.04 | 1.11 | 0.74 |

**Provides:** prof. RNDr. Peter Spišiak, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚTVŠ/ ÚTVŠ/CM/13 | **Course name:** Seaside Aerobic Exercise |
| **Course type, scope and the method:**<br>  **Course type:** Practice<br>  **Recommended course-load (hours):**<br>  **Per week:** 36 **Per study period:** 504<br>  **Course method:** present | |
| **Number of credits:** 2 | |
| **Recommended semester/trimester of the course:** | |
| **Course level:** I., II. | |
| **Prerequisities:** | |
| **Conditions for course completion:** | |
| **Learning outcomes:** | |
| **Brief outline of the course:** | |
| **Recommended literature:** | |
| **Course language:** | |
| **Notes:** | |
| **Course assessment**<br> 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:** 03.05.2015 | |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. | |

# COURSE INFORMATION LETTER

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

| | |
|---|---|
| **Faculty:** Faculty of Science | |

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

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

**Number of credits:** 4

**Recommended semester/trimester of the course:** 6.

**Course level:** I.

**Prerequisities:**

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

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

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

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

**Course language:**
 Slovak

**Notes:**

**Course assessment**
Total number of assessed students: 86

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 5.81 | 18.6 | 25.58 | 26.74 | 20.93 | 2.33 |

**Provides:** prof. RNDr. Danica Studenovská, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| | |
|---|---|
| **Faculty:** Faculty of Science | |

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

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

**Number of credits:** 3

**Recommended semester/trimester of the course:** 5.

**Course level:** I.

**Prerequisities:** ÚMV/MAN2c/10

**Conditions for course completion:**
 exam

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

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

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

**Course language:**
 Slovak

**Notes:**

**Course assessment**
 Total number of assessed students: 175

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 20.57 | 17.14 | 18.86 | 17.71 | 23.43 | 2.29 |

**Provides:** prof. RNDr. Jozef Doboš, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| | |
|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** KFaDF/ VKFV/07 | **Course name:** Selected Topics in Philosophy of Education (General Introduction) |
|---|---|

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

**Number of credits:** 2

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

**Course level:** I.

**Prerequisities:** KFaDF/DF1/05

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

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

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

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

**Date of last modification:**

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice | |
|---|---|
| **Faculty:** Faculty of Science | |
| **Course ID:** ÚGE/ SBP1/13 | **Course name:** Seminar of bachelor work |

**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:**
 Verification of acquired basic methodologic and formal procedures of the final thesis creation by presentation (70% of rating) and written examination (30%). To obtain A grade, weighted average of the both parts of examination must reach at least 90%, To obtain B it is 80%, for C it is 70%, for D 60% and for E 50%. Credits shall not be granted to a student who obtain less than 50% from any of both parts of examination.

**Learning outcomes:**
 Mastering basic theoretical, methodological and formal scientific procedures of bachelor thesis creation.

**Brief outline of the course:**
 The content and form of selected parts of thesis writing (abstract, introduction, conclusion, etc.) Ethics and culture of writing diploma thesis, citations and references, types of sources (printed, electronic, etc.). Formal aspects of the thesis. Linguistic adjustment (terminology, stylistics, syntax, grammar, typography). Rules of presentation of the thesis. Presentation of current results and state of diploma thesis.

**Recommended literature:**
 HOVORKA, D., KOMÁREK, K., CHRAPAN, J. 2011: Ako písať a komunikovať. Martin (Vydavateľstvo Osveta), 247 s.
 KATUŠČÁK, D. 2008: Ako písať záverečné a kvalifikačné práce. Nitra (Enigma), 162 s.
 ÚTVAR REKTORA UPJŠ (2011): Smernica č. 1/2011, Dostupné na internete: <http://www.upjs.sk/public/media/2438/smernica-1-2011.pdf>, 25 s.

**Course language:**
 Slovak

**Notes:**

| Course assessment | | | | | |
|---|---|---|---|---|---|
| Total number of assessed students: 283 | | | | | |
| A | B | C | D | E | FX |
| 94.35 | 3.89 | 0.71 | 0.0 | 1.06 | 0.0 |

**Provides:** prof. Mgr. Jaroslav Hofierka, PhD., Mgr. Ladislav Novotný, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|
| **Faculty:** Faculty of Science |

| **Course ID:** ÚGE/ SBP2/13 | **Course name:** Seminar of bachelor work |
|---|---|

**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:**
 Verification of acquired methodological and formal procedures of the creation of bachelor thesis by the presentation of current thesis creation by presentation of own bachelor thesis (100% of rating). To obtain A grade, the rating os student's presentation must reach at least 90%, To obtain B it is 80%, for C it is 70%, for D 60% and for E 50%. Credits shall not be granted to a student who obtain rating less than 50%.

**Learning outcomes:**
 Acquired skills to apply theoretical, methodological and formal scientific procedures of diploma thesis creation.

**Brief outline of the course:**
 The seminary is focused to the topics of individual bachelor thesis. Students present current state of their thesis, its content and its particular parts. Each bachelor thesis is discussed at scientific level.

**Recommended literature:**
 HOVORKA, D., KOMÁREK, K., CHRAPAN, J. 2011: Ako písať a komunikovať. Martin (Vydavateľstvo Osveta), 247 s.
 KATUŠČÁK, D. 2008: Ako písať záverečné a kvalifikačné práce. Nitra (Enigma), 162 s.
 ÚTVAR REKTORA UPJŠ (2011): Smernica č. 1/2011, Dostupné na internete: <http://www.upjs.sk/public/media/2438/smernica-1-2011.pdf>, 25 s.

**Course language:**
 Slovak

**Notes:**

**Course assessment**
 Total number of assessed students: 247

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 79.35 | 14.17 | 4.45 | 0.81 | 0.4 | 0.81 |

**Provides:** prof. Mgr. Jaroslav Hofierka, PhD., Mgr. Ladislav Novotný, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **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: 115 | | | | | |
| A | B | C | D | E | FX |
| 79.13 | 6.09 | 8.7 | 2.61 | 3.48 | 0.0 |

**Provides:** RNDr. Ingrid Semanišinová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| | |
|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ SMO/10 | **Course name:** Seminar to mathematical olympiad |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 6.

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

**Prerequisities:**

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

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

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

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

**Course language:**
 Slovak

**Notes:**

| Course assessment | | | | | |
|---|---|---|---|---|---|
| Total number of assessed students: 137 | | | | | |
| A | B | C | D | E | FX |
| 65.69 | 12.41 | 10.22 | 8.76 | 2.92 | 0.0 |

**Provides:** RNDr. Ingrid Semanišinová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

| | |
|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** KPE/ OLŠ/15 | **Course name:** School Administration and Legislation |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 3., 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: 15

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 26.67 | 20.0 | 40.0 | 6.67 | 6.67 | 0.0 |

**Provides:** Mgr. Zuzana Boberová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** KPO/ SPKVV/15 | **Course name:** Social and Political Context of Education |
|---|---|

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 4., 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: 0

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

**Provides:** prof. PhDr. Marcela Gbúrová, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

**Faculty:** Faculty of Science

| **Course ID:** KGER/ OJPV1/07 | **Course name:** Specialised German Language - Natural Sciences 1 |
|---|---|

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

**Number of credits:** 2

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

**Course level:** I.

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 125

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 20.8 | 21.6 | 26.4 | 22.4 | 8.0 | 0.8 |

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

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, 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: 7947

| abs | n | neabs |
|---|---|---|
| 87.96 | 8.12 | 3.93 |

**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, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, 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: 7437

| abs | n | neabs |
|---|---|---|
| 85.03 | 10.93 | 4.03 |

**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, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško, Mgr. Aurel Zelko, PhD., Mgr. Dana Dračková, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** ÚTVŠ/ TVc/11 | **Course name:** Sports Activities III. |
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| **Course type, scope and the method:**<br>　**Course type:** Practice<br>　**Recommended course-load (hours):**<br>　**Per week:** 2 **Per study period:** 28<br>　**Course method:** present |

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|---|
| **Number of credits:** 2 |

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

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

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| **Prerequisities:** |

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| **Conditions for course completion:** |

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| **Learning outcomes:** |

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| **Brief outline of the course:** |

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| **Recommended literature:** |

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| **Course language:** |

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| **Notes:** |

**Course assessment**
 Total number of assessed students: 4650

| abs | n | neabs |
|---|---|---|
| 89.63 | 4.71 | 5.66 |

| |
|---|
| **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, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško |

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| **Date of last modification:** 03.05.2015 |

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| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

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| **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: 3884

| abs | n | neabs |
|---|---|---|
| 85.79 | 6.77 | 7.44 |

**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, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško, Mgr. Aurel Zelko, PhD., Mgr. Dana Dračková, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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| **Faculty:** Faculty of Science |

| **Course ID:** ÚMV/ DGS/15 | **Course name:** Students` Digital Literacy |
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| **Course type, scope and the method:** <br>  **Course type:** Practice <br>  **Recommended course-load (hours):** <br>  **Per week:** 2 **Per study period:** 28 <br>  **Course method:** present |

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|---|
| **Number of credits:** 2 |

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

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|---|
| **Course level:** I. |

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| **Prerequisities:** |

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| **Conditions for course completion:** <br> continuous assessment and final project |

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| **Learning outcomes:** <br> To acquire an overview of the current possibilities of digital technology to develop skills and competencies with emphasis on the area of communication, social interaction and personal. To acquire basic digital skills for working with advanced technologies (mobile phone, tablet, laptop, social media, online webtechnologies). To understand the value of existing advanced technologies for better and more effective learning, work and active life in higher education, lifelong learning and further career prospects. |

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| **Brief outline of the course:** <br> Introduction to the problems of current, commonly available digital technology. Tools for access to online information source (mobile applications for access to information systems, databases, data books). Tools for collecting, generating direct information and data and its subsequent analysis and visualization. Tools for providing and sharing of electronic content (cloud technology - Google Drive, Youtube, Google+, Skydrive, Dropbox). Tools for communication, discussion and collaborative activities. Legal work with digital technologies and resources, plagiarism, critical evaluation of digital resources. Security, privacy, digital ethics and etiquette, digital citizenship. |

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|---|
| **Recommended literature:** <br> 1. Bruff, D. (2009). Teaching with classroom response systems: Creating active learning environments. San Francisco: Jossey-Bass. <br> 2. Byrne, R. (2012). Google Drive and Docs for Teachers. Free Tech for Teachers. <br> 3. Kawasaki, G. (2012). What the Plus! Google+ for the Rest of Us. Amazon igital Services. <br> 4. Kolb, L. (2011). Cell Phones in the Classroom: A Practical Guide for Educators. International Society for Technology in Education. |

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| **Course language:** <br> Slovak |

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| **Notes:** |

| Course assessment<br>Total number of assessed students: 19 | |
|---|---|
| abs | n |
| 100.0 | 0.0 |

**Provides:** doc. RNDr. Stanislav Lukáč, PhD., doc. RNDr. Jozef Hanč, PhD., doc. RNDr. Ľubomír Šnajder, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|---|
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚMV/ SVK/10 | **Course name:** Students scientific conference |
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**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: 57

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 98.25 | 1.75 | 0.0 | 0.0 | 0.0 | 0.0 |

**Provides:**

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|
| **Faculty:** Faculty of Science |

| **Course ID:** ÚGE/ SVG/04 | **Course name:** Students scientific conference of geography |
|---|---|

**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:** 6.

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

**Prerequisities:**

**Conditions for course completion:**

**Learning outcomes:**

**Brief outline of the course:**
 After choosing a topic suggested by supervisors implying a geographical problem, the students will work on the topic, write a thesis and defense it before the committee.

**Recommended literature:**

**Course language:**

**Notes:**

**Course assessment**
 Total number of assessed students: 145

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

**Provides:** doc. RNDr. Zdenko Hochmuth, CSc., prof. RNDr. Peter Spišiak, CSc., RNDr. Dušan Barabas, CSc., RNDr. Alena Gessert, PhD., RNDr. Janetta Nestorová-Dická, PhD., Mgr. Marián Kulla, PhD., Ing. Katarína Bónová, PhD., RNDr. Stela Csachová, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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|---|---|
| **University:** P. J. Šafárik University in Košice | |
| **Faculty:** Faculty of Science | |

| **Course ID:** ÚTVŠ/ LKSp//13 | **Course name:** Summer Course-Rafting of TISA River |
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| **Course type, scope and the method:** <br>  **Course type:** Practice <br>  **Recommended course-load (hours):** <br> **Per week:** 36 **Per study period:** 504 <br>  **Course method:** present |
| **Number of credits:** 2 |
| **Recommended semester/trimester of the course:** |
| **Course level:** I., II. |
| **Prerequisities:** |
| **Conditions for course completion:** |
| **Learning outcomes:** |
| **Brief outline of the course:** |
| **Recommended literature:** |
| **Course language:** |
| **Notes:** |

| **Course assessment** <br>  Total number of assessed students: 92 | |
|---|---|
| abs | n |
| 35.87 | 64.13 |

| |
|---|
| **Provides:** Mgr. Peter Bakalár, PhD. |
| **Date of last modification:** 03.05.2015 |
| **Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc. |

# COURSE INFORMATION LETTER

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

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|---|---|
| **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: 251

| abs | n |
|---|---|
| 43.82 | 56.18 |

**Provides:** Mgr. Marek Valanský, MUDr. Peter Dombrovský

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.

# COURSE INFORMATION LETTER

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

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|---|
| **Faculty:** Faculty of Science |

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| **Course ID:** KPE/ TVE/08 | **Course name:** Theory of Education |

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

**Number of credits:** 2

**Recommended semester/trimester of the course:** 4., 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: 201

| A | B | C | D | E | FX |
|---|---|---|---|---|---|
| 23.38 | 32.34 | 28.36 | 9.45 | 1.49 | 4.98 |

**Provides:** PaedDr. Renáta Orosová, PhD., Mgr. Zuzana Boberová, PhD., Mgr. Stanislava Marosi, PhD.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, 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: 81

| abs | n |
|---|---|
| 32.1 | 67.9 |

**Provides:** PaedDr. Imrich Staško, doc. PhDr. Ivan Šulc, CSc.

**Date of last modification:** 03.05.2015

**Approved:** doc. RNDr. Ondrej Hutník, PhD., doc. RNDr. Zdenko Hochmuth, CSc.