CONTENT

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: CJP/ PFAJAKA/07	**Course name:** Academic English

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

Number of ECTS credits: 2

Recommended semester/trimester of the course:

Course level: I., II., N

Prerequisities:

Conditions for course completion:
Combined method of teaching (classroom/distance)
Active classroom participation, assignments handed in on time, 2 absences tolerated
1 test (10th week), no retake. (in classroom, in case of distance learning due to worsened epidemiological situation – online)
Presentation on chosen topic (in case of distance learning - online thorugh MS Teams)
Final evaluation- average assessment of test (40%), essay (30%) and presentation (30%).
Grading scale: A 93-100%, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64% and less

Learning outcomes:

Brief outline of the course:

Recommended literature:
Seal B.: Academic Encounters, CUP, 2002
T. Armer :Cambridge English for Scientists, CUP 2011
M. McCarthy M., O´Dell F. - Academic Vocabulary in Use, CUP 2008
Zemach, D.E, Rumisek, L.A: Academic Writing, Macmillan 2005
Olsen, A. : Active Vocabulary, Pearson, 2013
www.bbclearningenglish.com
Cambridge Academic Content Dictionary, CUP, 2009

Course language:
English language, level B2 according to CEFR.

Notes:

Course assessment
Total number of assessed students: 380

A	B	C	D	E	FX
33.68	22.11	15.53	10.0	6.58	12.11

Provides: Mgr. Viktória Mária Slovenská

Date of last modification: 17.09.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PPPy/18	**Course name:** Advanced programming in Python

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 ECTS credits: 2

Recommended semester/trimester of the course: 6.

Course level: I.

Prerequisities: ÚINF/PAZ1a/15 and leboÚINF/ePAZ1a/15 and leboÚINF/PRG1/15

Conditions for course completion:
At least 50 % of the marks in the continuous assessment
A minimum of 50 % marks in the mid-term and end-of-semester practical tests
or
The final project - 100%

Learning outcomes:
Implement solutions to selected problems in Python using available modules. Use and implement non-trivial algorithms to solve selected problems. Use an object-oriented approach to problem solving. Program in Python in an object-oriented manner using Python specifics. Test programs. Implement parallel computing.

Brief outline of the course:
1. Introduction to the environment, basic features of Python, simple and structured data types.
2. Input, output, function definition, lambda function, generator notation, function as parameter, string formatting.
3. Control structures, iterating over data structures, context manager.
4. Exception handling and exception raising. Philosophy of exceptions in Python.
5. Working with files. Serialization and deserialization of data - json and pickle protocol. Text and binary files. Manipulation with files. Open data.
6. Object-oriented programming 1. Design of custom classes, special methods, properties, philosophy of accessing methods and attributes.
7. Object-oriented programming 2. Comparison and differences with Java. Multiple inheritance.
8. Method overloading. Static methods, abstract classes, data class.
9. Decorators, memoization, modules, packages.
10. Code validation (debugging), testing (doctest, unittest), test-driven development.
11. Parallel computing, processes, process triggering and inter-process communication (shared variable, pipe, queue).
12. Graphical program design and implementation.

Recommended literature:
PILGRIM, Mark. Dive into Python 3. 2. United States of America: Apress, 2004. ISBN 978-1430224150. Dostupné také z: https://diveintopython3.net/

SHIPMAN, John W. Tkinter 8.5 reference: a GUI for Python. Socorro, NM 87801: New Mexico Tech Computer Center, 2013. Dostupné také z: https://anzeljg.github.io/rin2/book2/2405/docs/tkinter/tkinter.pdf
LOTT, Steven F. Mastering Object-oriented Python. Birmingham B3 2PB, UK: Packt Publishing, 2014. ISBN 978-1-78328-097-1.

Course language:
Slovak language, knowledge of English language is only required to read documentation of Python.

Notes:

Course assessment
Total number of assessed students: 35

A	B	C	D	E	FX
8.57	14.29	25.71	25.71	11.43	14.29

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

Date of last modification: 30.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ ALG3b/10	**Course name:** Algebra II for informaticians and physicists

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 ECTS credits: 7

Recommended semester/trimester of the course: 4.

Course level: I., II.

Prerequisities: ÚMV/ALGa/10

Conditions for course completion:
Exam

Learning outcomes:
To provide deeper knowledge on vector spaces, linear transformations and Euclidean spaces.

Brief outline of the course:
Vector spaces, subspaces. A basis, a dimension and a characterization of n-dimensional vector spaces. The rank of a matrix. Linear transformations and their matrices. Operations with linear tranformations, matrices of sums and compositions of linear tranformations. Regular linear transformations, regular matrices. Similar matrices. Characteristic vectors and characteristic values of linear transformations.
Affine spaces, subspaces and their positions. Euclidean spaces, the distance of subspaces. Conics and quadrics.

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

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 290

A	B	C	D	E	FX
15.52	10.69	12.76	18.62	31.72	10.69

Provides: doc. RNDr. Roman Soták, PhD., RNDr. Mária Maceková, PhD., RNDr. Lucia Janičková, PhD.

Date of last modification: 26.03.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ASU1/15	**Course name:** Algorithms and data structures

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

Number of ECTS credits: 4

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities: (ÚINF/PAZ1a/15 and leboÚINF/ePAZ1a/15),(ÚINF/PAZ1b/15 and leboÚINF/ePAZ1b/15)

Conditions for course completion:
Practice activities, homeworks and midterm exam.
Final examination consisting of practice and theoretical test.

Learning outcomes:
Understand and learn algorithmic paradigms and data structures. Analyse time complexity of these algorithms.

Brief outline of the course:
Algorithms' time and space asymptotic complexity. Main Theorem. Amortized complexity.
Brute Force. Backtrack. Divide and Conquer. Dynamic programming. Comparison and non-comparison sort algorithms. Sweep line algorithms. Graph Theory Algorithms.
Data structures – queue, stack, priority queue, heap, prefix sum, binary search trees, interval trees, union & find, trie.

Recommended literature:
1, Laaksonen A.: Guide to Competitive Programming: Learning and Improving Algorithms Through Contests (Undergraduate Topics in Computer Science), Springer, 2017, ISBN 978-3319725468
2, Forišek M., Steinová M.: Explaining Algorithms Using Metaphors. Springer Briefs in Computer Science, Springer (2013), ISBN 978-1-4471-5018-3
3, R. Sedgewick, K. Wayne: Algorithms (4th Edition), Addison-Wesley Professional, 2011, ISBN 978-0321573513, http://algs4.cs.princeton.edu/home/
4, Open Data Structures: http://opendatastructures.org/

Course language:
Slovak or english

Notes:
Content prerequisities:
- programming skills in some programming language (Python/Java/C++/...)
- mathematics:
-- computing with polynomials, logarithmic and exponential functions

-- computing limits of sequences, L’Hospital rule

Course assessment
Total number of assessed students: 146

A	B	C	D	E	FX
13.01	5.48	17.12	24.66	36.99	2.74

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

Date of last modification: 25.02.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPE/ ALP/06	**Course name:** Alternative 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 ECTS 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: 242

A	B	C	D	E	FX
62.81	31.4	3.31	0.83	0.41	1.24

Provides: Mgr. Katarína Petríková, PhD.
Date of last modification: 14.06.2021
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/APS1/15	**Course name:** Applied probability and statistics

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 ECTS credits: 5

Recommended semester/trimester of the course: 5.

Course level: I., II.

Prerequisities: ÚMV/FRPb/19 and leboÚMV/MTIb/21 and leboÚMV/MZIb/10 and leboÚMV/MAN2c/10 and leboÚMV/MTFb/15

Conditions for course completion:
Written works during the semester, project.
Written and oral exam.

Learning outcomes:
Acquired basic concepts, techniques and models of probability theory, statistics and corresponding software.

Brief outline of the course:
1) Random event, probability and conditional probability.
2) Probability distribution laws.
3) Characteristics of position, variability and dependence.
4) Basic discrete and continuous distributions.
5) The law of large numbers and the central limit theorem.
6) Random sample. Initial analytical and geometric analysis of data.
7) Quantiles, basic distributions and basic theorem of mathematical statistics.
8) Theory of estimates, method of moments and maximum likelihood. Hypothesis testing.
9) Tests on distribution parameters and goodness-of-fit tests.
10) Modeling of dependencies and noise. Least squares method and smoothing.
11) Polynomial regression models.
12) Pseudorandom quantities and Monte Carlo methods.

Recommended literature:
- Cs. Török: Úvod do teórie pravdepodobnosti a matematickej štatistiky, Košice, 1992
- M.R.Spiegel, J.J.Schiller, R.A.Srinivasan, Probability and Statistics, McGraw Hill, 2009
- J. Maindonald, W.J. Braun, Data Analysis and Graphics Using R – an Example-Based Approach, CAMBRIDGE UNIVERSITY PRESS, 2010

Course language:
Slovak or english

Notes:
Face to face or online teaching.

Content prerequisites:
the basics of differential, integral and matrix calculus

Course assessment
Total number of assessed students: 74

A	B	C	D	E	FX
17.57	17.57	21.62	12.16	29.73	1.35

Provides: doc. RNDr. Csaba Török, CSc.

Date of last modification: 02.07.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ AFJ1a/15	**Course name:** Automata and formal languages

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

Number of ECTS credits: 4

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities:

Conditions for course completion:
Oral examination.

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

Brief outline of the course:
1: Chomsky hierarchy of grammars: alphabet, symbol (letter, character), transitive closure, word (string), empty word (empty string), length of a string, concatenation, language, grammar, nonterminal symbol, terminal symbol, initial nonterminal (initial symbol), grammar rule, derivation step, language generated by a grammar, Chomsky hierarchy of grammars - phrase-structure, context sensitive, context free, regular
2: Deterministic finite state automata: finite state automaton, state, input symbol, output symbol, initial state, transition function, output function, examples of automata and their graphic representation, generalized transition and output functions and their basic properties
3: Reduction of automata I: equivalent automata, minimal (optimal) automaton, reachable state, properties of reachable states, elimination of unreachable states
4: Reduction of automata II: equivalent states, k-equivalent states, properties of equivalence and k-equivalence, relation between k-equivalence and (k+1)-equivalence, partitioning the state set into equivalence classes, elimination of equivalent states
5: Reduction of automata III: proof of correctness, unambiguity, and optimality of reduced automaton, testing equivalence of two automata
6: Deterministic finite state acceptors: basic definitions, language recognized by a finite state acceptor, common properties of acceptors and automata with an output, minimizing a finite state acceptor
7: Operations with regular languages: complement, intersection, union, difference, symmetric difference, testing of emptiness, inclusion, equality, and disjointness for regular languages
8: Nondeterministic finite state acceptors: definition, transition function, language recognized by a nondeterministic acceptor, elimination of nondeterminism
9: epsilon-acceptors: definition, properties, elimination of epsilon-transitions

10: Regular grammars: regular grammar, extended regular grammar, transformation of acceptor to a regular grammar, transformation of extended regular grammar to an epsilon-acceptor
11: Regular expressions I: basic properties, transformation of regular expression to an epsilon-acceptor
12: Regular expressions II: regular equations, valid algebraic manipulations with regular expressions, solving an equation with a single unknown variable, solving a system of regular equations, transformation of acceptor to a regular expression
13: Another constructions: review of transformations among various representations, an example of a direct transformation of a grammar to a regular expression, closure of the class of regular languages under another language operations – concatenation and Kleene star, mirror image
14: Another operations: homomorphism and inverse homomorphism, a context-free language that is not regular

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: 850

A	B	C	D	E	FX
25.65	18.24	23.88	17.76	9.65	4.82

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

Date of last modification: 17.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ AFJ1b/15	**Course name:** Automata and formal languages

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

Number of ECTS credits: 5

Recommended semester/trimester of the course: 5.

Course level: I., II.

Prerequisities: ÚINF/AFJ1a/15

Conditions for course completion:
Test and oral examination.

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

Brief outline of the course:
1: Pushdown automata: definition of a pushdown automaton, accepting by final states, accepting by empty pushdown
2: Deterministic pushdown automata: examples of application in practice
3: Context-free grammars: basic definition, leftmost derivation, derivation tree, elimination of rules of type A→epsilon and A→B, Chomsky normal form
4: Relation between context-free grammars and pushdown automata: transforming context-free grammar to a pushdown automaton, transforming pushdown automaton to a context-free grammar
5: Pumping lemma I: Statement of the lemma and its proof
6: Pumping lemma II: applications of the lemma
7: Closure properties of context-free languages
8: Closure properties of deterministic context-free languages
9: Pushdown automata producing an output: basic definitions and properties, applications in practice
10: Context-sensitive languages: context-sensitive grammar, nondeterministic linear-bounded Turing machine (LBA), transforming context-sensitive grammar to an LBA, transforming LBA to a context-sensitive grammar
11: Closure properties of context-sensitive languages
12: Recursively enumerable languages: phrase-structure grammar, nondeterministic and deterministic Turing machine, transforming nondeterministic Turing machine to a phrase-structure grammar, transforming phrase-structure grammar to a deterministic Turing machine, closure properties
13: Universal Turing machine
14: Algorithmically undecidable problems of the formal language theory

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: 567

A	B	C	D	E	FX
37.92	15.87	19.75	17.64	6.17	2.65

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

Date of last modification: 17.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ BKP/14	**Course name:** Bachelor Project
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS 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: 96	

abs	n
96.88	3.13

Provides:
Date of last modification: 03.05.2015
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ BKP/14	**Course name:** Bachelor Project
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS 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: 5	
abs	n
100.0	0.0
Provides:	
Date of last modification:	
Approved:	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ BPO/14	**Course name:** Bachelor Thesis and its Defence
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS 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: 153

A	B	C	D	E	FX
38.56	30.07	15.03	8.5	7.19	0.65

Provides:
Date of last modification: 31.07.2015
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ BPO/14	**Course name:** Bachelor Thesis and its Defence

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

Number of ECTS 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: 112

A	B	C	D	E	FX
47.32	27.68	11.61	8.04	5.36	0.0

Provides:

Date of last modification: 09.01.2019

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ KAR/05	**Course name:** Basics 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 ECTS 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: 226

A	B	C	D	E	FX
77.88	15.04	5.31	0.0	1.77	0.0

Provides: RNDr. Alena Gessert, PhD.

Date of last modification: 27.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of ECTS 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: 1551

A	B	C	D	E	FX
32.82	23.08	17.15	17.15	9.28	0.52

Provides: doc. RNDr. Monika Kassayová, CSc.

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

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

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 ECTS credits: 5

Recommended semester/trimester of the course: 1.

Course level: I.

Prerequisities:

Conditions for course completion:
During the semester it is necessary to pass out the work outputs from the exercises. The knowledge gained on the exercises will be verified by continuous written examinations. The number of work outputs and written examinations will be announced at the beginning of the semester. It is possible to obtain 30% of the assessment criteria for the exercise (work outputs and written examinations). The final evaluation of the exercises is determined by the instructor of the subject based on the completion of tasks in the exercises during the semester. The final evaluation of the study subject is based on the combination of the evaluation conditions from the exercise and the final exam. The final exam may be enrolled by a student who has fulfilled the requirements for attending the exercises and who achieves a raiting of at least minimum 16 % in evaluation in exercises. The final assessment is the weighted average of the exercise assessment (30 %) and the final exam (70 %). Credits are awarded only to a student who achieves rating at least at the grade level of E, i.e. he achieves the raiting of at least 51 %. Credits will not be awarded to a student who does not meet the requirements of the exercise and the exam is rated FX. Rating scale: A (100-91%), B (81-90%,) C (71-80%), D (61-70%), E (51-60%).

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. The student masters the design, use and evaluation of the properties of cartographic representations in various geoinformatics applications.

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:

HOFIERKA, J., J. KAŇUK, M. GALLAY, 2014. Geoinformatika. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach. ISBN 978-80-8152-178-2.
HOJOVEC, V. et al., 1987. Kartografie. Praha: Geodetický a kartografický podnik v Praze. ISBN 29-621-87.
LONGLEY, P.A., M. GOODCHILD, D. J. MAGUIRE, D. W. RHIND, 2010. Geographic Information Systems and Science. 3rd ed. Hoboken: Wiley & Sons, ISBN 978-0-470-72144-5.
PRAVDA, J., D. KUSENDOVÁ, 2004. Počítačová tvorba tematických máp. Bratislava: Univerzita Komenského v Bratislave. ISBN 80-223-2011-0.
ROBINSON, A. H. et al., 1995. Elements of Cartography. 6th ed. Hoboken: Wiley & Sons. ISBN 0-471-55579-7.
VOŽENÍLEK, V. et al., 2011. Metody tematické kartografie - Vizualizace prostorových jevů. Olomouc: Univerzita Palackého v Olomouci. ISBN 978-80-24427-90-4.

Course language:
Slovak

Notes:
withot notes

Course assessment
Total number of assessed students: 421

A	B	C	D	E	FX
14.73	21.62	21.14	19.48	18.29	4.75

Provides: prof. Ing. Vladimír Sedlák, PhD., doc. RNDr. Ján Kaňuk, PhD., Mgr. Patrícia Gurová, Mgr. Ondrej Tokarčík

Date of last modification: 28.09.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KOP/ OPaPDV/14	**Course name:** Civil Law and Intellectual Property Rights
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 ECTS credits: 4	
Recommended semester/trimester of the course: 3., 5.	
Course level: I., II., N	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 103	

abs	n
94.17	5.83

Provides: doc. JUDr. Renáta Bačárová, PhD., LL.M., prof. JUDr. Peter Vojčík, CSc.
Date of last modification: 16.12.2020
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of ECTS 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.
Online teaching (MS Teams), in case of an improved epidemiological situation = on-site teaching.
2 credit tests (presumably in weeks 6/7 and 12/13) and a short oral presentation in English.
The tests will be taken online (MS Teams) during online teaching and in class in case of on-site classes.
The presentation will be sent to the course instructor as a video recording.
Final evaluation consists of the scores obtained for the 2 tests (70%) and the presentation (30%).
Final grade will be calculated as follows: A 93-100 %, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64 % and less.

Learning outcomes:
Uplatnenie a aktívne používanie svojich teoretických vedomostí v praktických komunikačných situáciách. Zdokonalenie jazykových vedomostí a zručností študenta, rečovej, pragmatickej a vecnej kompetencie, predovšetkým zlepšujú komunikáciu, schopnosťprijímať a formulovať výpovede, efektívne vyjadrovať svoje myšlienky ako aj orientovať sa v obsahovom pláne výpovede. Precvičovanie rečových intencií kontaktných (napr. pozdravy, oslovenia, pozvanie, oslovenie), informatívnych (napr. získavanie a podávanie informácií, vyjadrenie priestorových a časových vzťahov), regulačných (napr. prosba, poďakovanie, zákaz, pochvala, súhlas, nesúhlas) a hodnotiacich (napr. vyjadrenie vlastného názoru, stanoviska, želania, emócií). Výsledkom budovania praktickej jazykovej kompetencie majú byť vedomosti a zručnosti zodpovedajúce požiadavkám a kritériám dokumentu Spoločný európsky referenčný rámec pre vyučovanie jazykov.

Brief outline of the course:
Rodina, jej formy a problémy
Vyjadrovanie pocitov a dojmov
Dom, bývanie a budúcnosť
Formy a dialekty v anglickom jazyku
Život v meste a na vidieku
Kolokácie a idiomy, zaužívané slovné spojenia
Prázdniny a sviatky vo svete

Životné prostredie a ekológia
Výnimky zo slovosledu
Frázové slovesá a ich použitie
Charakteristiky neformálneho diškurzu

Recommended literature:

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

Course language:
English language, B2 level according to CEFR

Notes:

Course assessment
Total number of assessed students: 260

A	B	C	D	E	FX
40.38	22.31	18.85	8.85	6.54	3.08

Provides: Mgr. Barbara Mitríková, Mgr. Zuzana Naďová

Date of last modification: 11.02.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of ECTS credits: 2

Recommended semester/trimester of the course:

Course level: I., II., N

Prerequisities:

Conditions for course completion:
Active classroom participation (max. 2x90 min. absences tolerated). 2 test (5th/6th and 12/13th week), no retake. Final evaluation- average assessment of tests. Grading scale: A 93-100%, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64% and less.

Learning outcomes:

Brief outline of the course:

Recommended literature:
Vince M.: Macmillan Grammar in Context, Macmillan, 2008
McCarthy, O'Dell: English Vocabulary in Use, CUP, 1994
C. Oxengen, C. Latham-Koenig: New English File Advanced, Oxford 2010
Misztal M.: Thematic Vocabulary, Fragment, 1998
www.bbclearningenglish.com
ted.com/talks

Course language:

Notes:

Course assessment
Total number of assessed students: 406

A	B	C	D	E	FX
39.66	18.97	16.75	8.62	5.91	10.1

Provides: Mgr. Lenka Klimčáková

Date of last modification: 14.09.2019

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of ECTS 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: 54

A	B	C	D	E	FX
59.26	11.11	9.26	3.7	9.26	7.41

Provides: Mgr. Blanka Jenčíková

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
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 ECTS credits: 3	
Recommended semester/trimester of the course: 6.	
Course level: I.	
Prerequisities:	
Conditions for course completion: At the beginning of the semester, students choose a region from provided list. During the semester, they elaborate presentation reflecting formal and content requirements explained by teacher at the beginning of the semester. This part constitute 50% of total total evaluation. Another 10% represents the activity at the seminars. Remaining 40 % of evaluation is represented by written verification of acquired knowledge. Evaluation of all - the presentation, activity and written verification must reach at least 50% to complete the course. To get an A grade, it is necessary to obtain at least 90% of weighted average. 80% to grade B, 70% to C, 60% to D, and at least 50% to grade E.	
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: 502

A	B	C	D	E	FX
27.29	35.86	22.71	8.37	5.18	0.6

Provides: doc. Mgr. Ladislav Novotný, PhD.

Date of last modification: 01.04.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/TVY/15	**Course name:** Computability theory

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

Number of ECTS credits: 4

Recommended semester/trimester of the course: 5.

Course level: I., II.

Prerequisities:

Conditions for course completion:

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

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

Recommended literature:
1. BRIDGES, Douglas. Computability, A Mathematical Sketch book. Springer--Verlag, 1994. ISBN:: 978-0387941745
2. BUKOVSKÝ, Lev. Teória algoritmov, ES UPJŠ, Košice, 1999. ISBN 8070973730
3. MACHTEY, Michael a Paul YOUNG. An Introduction to the General Theory of Algorithms, North--Holland, Amsterdam 1978.
4. KRAJČI, Stanislav. Teória vypočítateľnosti. http://ics.upjs.sk/~krajci/skola/vyucba/ucebneTexty/vypocitatelnost.pdf

Course language:

Notes:

Course assessment
Total number of assessed students: 277

A	B	C	D	E	FX
46.93	11.91	13.0	5.78	6.14	16.25

Provides: prof. RNDr. Stanislav Krajči, PhD.

Date of last modification: 08.07.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ UNV1/15	**Course name:** Computational and cognitive neuroscience 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 ECTS credits: 5

Recommended semester/trimester of the course: 3.

Course level: I.

Prerequisities:

Conditions for course completion:
Midterm exam
Final exam consisting of written and/or oral part

Learning outcomes:
Overview anatomy, physiology, and cognitive processes in the human brain with focus on computational aspects of cognition and computational tools used in neuroscience.

Brief outline of the course:
1. Intro to neural and cognitive science
2. Overview of anatomy and physiology of the central nervous system (CNS)
3. Methods of study in neuroscience. Sensory, motor and associative brain areas.
4. Neuron: anatomy, types, action potential
5. Propagation of signals in the neuron, neural coding.
6. Synaptic transmission and plasticity - neural basis of learning and memory.
7. Psychology of memory and learning.
8. Vision: Intro. Perception of brightness, edges, color. Model BCS/FCS. Perception of size and sitance.
9. Hearing and auditory cognition.
10. Language, psycholinguistics, speech perception and production.
11. Attention.
12. Crossmodal interaction (vision, hearing, touch).
13. Reasoning and decision making.

Recommended literature:
1. Poeppel D., Mangun G., Gazzaniga M. (ed.): The Cognitive Neurosciences. 6th ed. MIT Press. 2020. ISBN-13: 978-0262043250
2. Dayan P and LF Abbott: Theoretical Neuroscience - Computational and Mathematical Modeling of Neural Systems. MIT Press, 2005 ISBN-13: 978-0262541855
3. Thagard P: Mind: Introduction to Cognitive Science, 2nd Edition. Bradford Books. ISBN-13⁀: ⁀978-0262701099

Course language:

Slovak or English

Notes:
Content prerequisites:
Algebra, programming (Matlab).

Course assessment
Total number of assessed students: 29

A	B	C	D	E	FX
17.24	24.14	20.69	24.14	10.34	3.45

Provides: doc. Ing. Norbert Kopčo, PhD., Ing. Peter Lokša, PhD.

Date of last modification: 08.07.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/PSIN/15	**Course name:** Computer network Internet

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

Number of ECTS credits: 5

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities: ÚINF/PAZ1a/15 and leboÚINF/ePAZ1a/15 and leboÚINF/PRG1/15

Conditions for course completion:
Activity at excercises (max 18 points), home work (max 18 points), test (max 30 points).
Verbal exam (min 25 points, max 50 points). Required minimum for passing the course is 55 points.

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

Brief outline of the course:
1. Introduction to computer networks, internet connection types, delay and loss in packet-switched networks, ISO OSI reference model and TCP/IP protocols family.
2. Application layer: Web and HTTP, protocol FTP ,e-mail and SMTP, POP3, IMAP,
3. Application layer: domain names and DNS, Peer-to-peer applications. Security in computer networks.
4. Transport layer: services, multiplexing and demultiplexing, protocol UDP, reliable data transfer
5. Transport layer: connection oriented transport protocol TCP, flow and congestion control.
6. Network Layer: Internet protocol IPv4, virtual circuit and datagram networks, packet fragmentation, routing table, application protocol DHCP
7. Network Layer: network address translation NAT, ICMP protocol, internet protocol IPv6
8. Network Layer: routing algorithms and protocols, broadcast and multicast routing
9. Link layer: error detection, multiple access methods CSMA/CD and CSMA/CA, Ethernet, frames, protocols ARP and RARP, link layer addressing
10. Link Layer and wireless and mobile networks: hub, switch, virtual LAN, 802.11 Wireless LAN, Bluetooth 802.15, WiMAX 802.16, Mobile IP, mobility in GSM
11. Physical Layer: Communication channels parameters, digital and analog encoding.

Recommended literature:
1. J. F. Kurose, Keith W. Ross: Computer Networking: A Top-Down Approach, 7. edition, 2016
2. A. S. Tanenbaum: Computer Networks, 5. edition, Pearson, 2010
3. W. Stallings: Local and Metropolitan Area Networks, Prentice Hall, 2000

4. E. Comer, R.E. Droms: Computer Networks and Internets, Prentice Hall, 2003
5. W. R. Stevens: TCP/IP Illustrated, Vol.1: The Protocols, Addison-Wesley, 1994

Course language:

Notes:

Course assessment
Total number of assessed students: 791

A	B	C	D	E	FX
9.73	5.18	12.64	16.43	36.16	19.85

Provides: doc. RNDr. Jozef Jirásek, PhD., RNDr. Peter Gurský, PhD.

Date of last modification: 09.07.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ KRS/15	**Course name:** Cryptographic systems and their applications

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

Number of ECTS credits: 6

Recommended semester/trimester of the course: 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:
Homeworks, midterm written exam, active participation in laboratory exercises.
Final written exam, possibly oral exam.

Learning outcomes:
This course covers the basic knowledge in understanding and using cryptography. The main focus is on definitions, theoretical foundations, and rigorous proofs of security, with some programming practice. Topics include symmetric and public key encryption, message integrity, hash functions, block cipher design and analysis, number theory, and digital signatures. The course also provides an introduction to cryptographic protocols for authentication and key management, including PKI and certificates.

Brief outline of the course:
Classical cryptography, basic information theory, cryptoanalysis, security of classical ciphers. Symmetric ciphers - stream ciphers, block ciphers (DES, AES), modes of operation. Asymmetric ciphers - RSA, Elgamal, elliptic curve cryptosystems. Hash functions, message authentication codes, digital signatures. Authentication, key establishment and distribution, certificates.

Recommended literature:
1. PAAR, Ch., PELZL, J.: Understanding Cryptography, Springer 2010.
2. STINSON, D. R.. PATERSON, M. B.: Cryptography: Theory and Practie. CRC Press, 2018.
3. MAO, W. Modern Cryptography: Theory and Practice. Prentice Hall, 2003.
4. MENEZES, A., OORSCHOT, P. van, VANSTONE, S.: Handbook of Applied Cryptography. CRC Press, 1996.
5. SCHNEIER, B.: Applied Cryptography, 20th Edition, John Wiley & Sons Inc., 2015

Course language:
Slovak or English

Notes:
Content prerequisities: basic number theory and algebra, basic programming

Course assessment
Total number of assessed students: 112

A	B	C	D	E	FX
12.5	9.82	13.39	13.39	33.04	17.86

Provides: RNDr. Rastislav Krivoš-Belluš, PhD.

Date of last modification: 07.07.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ KUL/12	**Course name:** Cultural 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 ECTS credits: 4	
Recommended semester/trimester of the course: 3.	
Course level: I., II.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature: ANDĚL. J. 1998: Kultúrní geografie. UJEP Ústí nad Labem, 146 s. ANDERSON, K. et al. 2003: Handbook of cultural geography. 601 p. BARŠA, P. 1999: Politická teorie multikulturalismu, CDK. BERGMAN, E. F. 1995: Human Geography. Cultures, Connections and Landscapes. Prentice Hall, Engewood Cliffs. BONNEMAISON, J. 2005: Culture and Space. I. B. Tauris. DIAMOND, J. 1997: Guns, germs and steel: the fates of human societies. Norton & co., New York. DIAMOND, J. 2019: Otrasy – Ako národy riešia svoje krízy. Premedia, 408 s. DOSTÁL, P. 1999: Ethnicity, mobilization and territory: an overview of recent experien-ces. Acta UC, Geographica, XXXIV, 1, s. 45-58. HEŘMANOVÁ, E., CHROMÝ, P. a kol. 2009: Kulturní regiony a geografie kultury. 1. vyd. Praha: ASPI, a. s., 292-301. KRUPA, V., GENZOR, J. 1996: Jazyky sveta v priestore a čase. Veda, SAV Bratislava, 356 s. MACDONALD, F., MASON, A. 2009: Kultúra ľudstva. Ottova encyklopédia. Ottovo nakladatelství, s. r. o. Praha, 256 s. MURRAY, W, E. 2006: Geographies of Globalization. Routledge Contemporary Human Geography. Routledge Taylor & Francis Group London and New York, 32 s. ROGERS, A. 1994: Lidé a kultúry. Nakladatelský dům Praha, 256 s.	
Course language: Slovak	
Notes:	

Course assessment
Total number of assessed students: 548

A	B	C	D	E	FX
54.2	32.3	10.04	3.1	0.36	0.0

Provides: Mgr. Marián Kulla, PhD., Mgr. Štefan Kolečanský, prof. Mgr. Jaroslav Hofierka, PhD.

Date of last modification: 09.10.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ DBS1a/15	**Course name:** Database systems

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

Number of ECTS credits: 5

Recommended semester/trimester of the course: 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:
Written works during the semester, project.
Written and oral exam.

Learning outcomes:
Acquired basic concepts and techniques of relational database theory and corresponding software. Know the principles of relational databases and learn the basics of query language. Understand the formal foundations of database systems - three-valued logic, relational algebra. Be able to model and design DB, and the role of data warehouses.

Brief outline of the course:
1) Relational databases. Query language SQL, filtering.
2) Data types, operators, numerical, string and time functions.
3) JOIN operations.
4) AGGREGATION AND GROUP BY.
5) Data and database models. Relational scheme. RDB principles. Data integrity.
6) DB design, ER diagrams.
7) System commands about DB and tables. Cascading deletion and update.
8) Nested queries. ROLLUP. CASE expression.
9) Three-valued logic. Quantifiers and NOT. Set operations.
10) Data science and knowledge acquisition using R.
11) Data warehouses. Data cube. Pivot table.
12) Normalization of relational databases - 1. Relational algebra.

Recommended literature:
C.J. Date, Database Design and Relational Theory, 2012, O'Reilly Media, Inc., ISBN: 978-1-449-32801-6
J. Murach, Murach's MySQL, 3rd Edition, 2019, Mike Murach & Associates, Inc., ISBN-10: 1943872368
- R. Ramakrishnan, J. Gehrke, Database Management Systems, 2020, McGraw-Hill, ISBN13 9780071231510
- S. Krajčí: Databázové systémy, UPJŠ, 2005

Course language:

Notes:

Course assessment
Total number of assessed students: 858

A	B	C	D	E	FX
10.61	9.21	17.95	22.84	32.52	6.88

Provides: doc. RNDr. Csaba Török, CSc., Mgr. Dávid Varga

Date of last modification: 02.07.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ DBS1b/15	**Course name:** Database systems

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

Number of ECTS credits: 6

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities: ÚINF/DBS1a/15 and leboÚINF/DBdi/15

Conditions for course completion:
Written works during the semester, project.
Written and oral exam.

Learning outcomes:
Acquired advanced techniques of relational databases. Theoretical foundations of DB normalization, ETNF. Principles of NoSQL databases, MongoDB.

Brief outline of the course:
1) Introduction to SQL Server. Set operations. Window functions.
2) Stored procedures. System and user functions.
3) Views. CTE, recursion and transitive closure.
4) Transactions. Cursors. Pivoting.
5) Triggers and integrity. Physical organization of data, B-trees and indexes.
6) XML documents and their querying. JSON.
7) Functional dependencies and NF.
8) The latest normal form - ETNF.
9) Big data and NoSQL.
10) MongoDB, CRUD and cursors.
11) Aggregations and indices.
12) Replication and sharding.

Recommended literature:
- Date C.J., Database Design and Relational Theory, O'Reilly, 2012
- I. Ben-Gan, D. Sarka, A. Machanic, K. Farlee, T-SQL Querying, 2015, Microsoft Press, ISBN: 978-0-7356-8504-8
- I. Ben-Gan, T-SQL Fundamentals, Third Edition, 2016, Microsoft Press, ISBN: 978-1-5093-0200-0
- L. Davidson, Pro SQL Server Relational Database Design and Implementation, 2021, Apress, ISBN-13: 978-1-4842-6496-6
- K. Chodorow, MongoDB: The Definitive Guide, O'Reilly, second edition, 2013

Course language:

Notes:
If necessary, teaching, mid-term and final evaluation will be by distance form.

Course assessment
Total number of assessed students: 732

A	B	C	D	E	FX
9.7	8.2	12.3	24.45	34.97	10.38

Provides: doc. RNDr. Csaba Török, CSc., Mgr. Dávid Varga

Date of last modification: 02.07.2021

Approved:

COURSE INFORMATION LETTER

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 ECTS credits: 2

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

Course level: I.

Prerequisities:

Conditions for course completion:
1st of the evaluation: active participation in the training part (30p). 2nd part of the evaluation: active participation in workshops (20p). In total, students can get 50p and the final evaluation is as follows: 50 - 45: A; 44 - 40: B; 39-35: C; 34-30: D; 29 - 25: E 24 and less: FX. Detailed information in the electronic bulletin board of the course in AIS2. The teaching of the subject will be realized by a combined method.

Learning outcomes:
The student understands the principals of research data based prevention of risk behavior, can describe and explain the determinants of risk behavior as well as protective and risk factors for substance use. Student understands and adequately interprets the theory explaining the background of substance and non-substance addictions.
The student is also able to state and classify the types and forms of prevention, strategies and approaches in prevention, can distinguish effective strategies from ineffective ones.
The student is able to adequately interpret their experience with preventive activities in the group and assume their positive effect as well as limitations and threats.

Brief outline of the course:

Recommended literature:
Orosová, O. a kol. (2012). Základy prevencie užívania drog a problematického používania internetu v školskej praxi. Košice: UPJŠ.
Sloboda, Z., & Bukoski, J. (Eds.). (2006). Handbook of Drug Abuse Prevention: Theory, Science, and Practice. New York: Springer.
National and international scientific journals.

Course language:
slovak

Notes:

Course assessment
Total number of assessed students: 407

A	B	C	D	E	FX
69.29	22.6	5.65	2.21	0.25	0.0

Provides: prof. PhDr. Oľga Orosová, CSc., Mgr. Marta Dobrowolska Kulanová, PhD., Mgr. Lucia Barbierik, PhD., Mgr. Lenka Abrinková, Mgr. Frederika Lučanská, Mgr. Viera Čurová, Mgr. Marcela Štefaňáková, PhD.

Date of last modification: 25.06.2021

Approved:

COURSE INFORMATION LETTER

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

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 ECTS credits: 2

Recommended semester/trimester of the course: 5.

Course level: I.

Prerequisities:

Conditions for course completion:
Conditions for ongoing evaluation:
1. Creation of a worksheet for student (with custom graphics).
2. Creation of a multimedia educational presentation (with pictures, animations and sounds).
3. Creation of an interactive educational quiz (with various types of quiz items).
4. Creation of an instructional educational video.
Conditions for the final evaluation:
1. Creation and presentation of final project on the use of educational software in education.
Conditions for successful completion of the course:
Obtaining at least 50% of points for ongoing and final assignments.

Learning outcomes:
Students will receive, resp. deepen their basic skills in working with:
a) presentation software, programs for creating and editing images, animations, diagrams, sounds, conceptual maps,
b) programs for the creation of didactic tests, questionnaires, surveys,
c) simulation and modeling software,
d) selected subject-oriented educational programs,
Students present and discuss their idea of the use of educational software and educational Internet resources and tools in the selected school subject.

Brief outline of the course:
1. Overview of educational software and educational web resources and tools.
2. Creating and processing images into teaching aids (word clouds, QR codes, diagrams, concept maps).
3. Creating raster animations. Creating and processing sounds.
4. Creation of instructional educational video.
5. Electronic voting (Polleverywhere, Plickers, Kahoot!) and questionnaire creation (Google Forms).
6. Creation of didactic tests (Google Forms, HotPotatoes).
7. Collaborative web applications (mind42, miro, whiteboard, padlet).
8. Online communication tools (BBB).

9. Complex online learning environments (Moodle).
10. Online educational projects and competitions (eTweening, WebQuest, PALMA junior).
11. Simulations and modelling (WolframAlpha, PhET, Geogebra). Subject-focused educational programmes.
12. Creation of educational software in Scratch environment.

Recommended literature:

SOLOMON, Gwen and Lynne SCHRUM, 2014. Web 2.0 How-to for Educators. Second. International Society for Technology in Education, 314 p. ISBN 978-1564843517.
STOBAUGH, Rebecca, 2019. Fifty Strategies to Boost Cognitive Engagement: Creating a Thinking Culture in the Classroom (50 Teaching Strategies to Support Cognitive Development). Solution Tree Press, 176 p. ISBN 978-1947604773.
LEMOV, Doug, 2015. Teach Like a Champion 2. 0: 62 Techniques That Put Students on the Path to College [online]. 2nd edition. John Wiley & Sons, Incorporated, 509 p. [cited 2021-7-10]. ISBN 9781118898628. Available from: https://ebookcentral.proquest.com/lib/upjs-ebooks/detail.action?docID=1895720
European Schoolnet: Transforming education in Europe [online]. [cited 2021-7-10]. Available from: http://www.eun.org/home
Science On Stage Europe [online]. Science on Stage Europe e.V. [cited 2021-7-10]. Available from: https://www.science-on-stage.eu/

Course language:
Slovak and partly English due to selected programs and information sources

Notes:
By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

Course assessment
Total number of assessed students: 52

A	B	C	D	E	FX
61.54	19.23	13.46	0.0	5.77	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 01.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: CJP/ PFAJ4/07	**Course name:** English Language of Natural Science

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

Number of ECTS credits: 2

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities:

Conditions for course completion:
Distant form of study (Online through MS teams) - based on the sylabus
Active participation in class and completed homework assignments. Students are allowed to miss 2 classes at the most (in case of online form - not attending online class/ assignments not handed in)
Continuous assessment: 2 credit tests taken thorugh MS Teams online(presumably in weeks 6 and 13) and academic presentation in English given through MS Teams online.
In order to be admitted to the final exam, a student has to score at least 65 % as a sum of both credit tests.
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:
Enhancement of students' language skills (speaking, writing, reading and listening comprehension) in English for specific purposes and development of students' language competence (familiarization with selected phonological, lexical and syntactic phenomena), improvement of students' pragmatic competence (familiarization with selected language functions) and improvement of presentation skills at B2 level (CEFR) with focus on terminology of English for natural science.

Brief outline of the course:
1. Introduction to studying language
2. Selected aspects of scientific language
3. Talking about academic study
4. Discussing science
5. Defining scientific terminology and concepts
6. Expressing cause and effect
7. Describing structures
8. Explaining processes
9. Comparing objects, structures and concepts
10. Talking about problem and solution
11. Referencing authors

12. Giving examples
13. Visual aids and numbers
14. Referencing time and place
Presentation topics related to students´study fields.

Recommended literature:

study materials provided by the course instructor
Redman, S.: English Vocabulary in Use, Pre-intermetdiate, Intermediate. Cambridge University Press, 2003.
Armer, T.: Cambridge English for Scientists. CUP, 2011.
Wharton J.: Academic Encounters. The Natural World. CUP, 2009.
Murphy, R.: English Grammar in Use. Cambridge University Press, 1994.
P. Fitzgerald : English for ICT studies. Garnet Publishing, 2011.
https://worldservice/learningenglish, https://spectator.sme.sk
www.isllibrary.com

Course language:

Notes:

Course assessment

Total number of assessed students: 2744

A	B	C	D	E	FX
38.16	25.4	16.65	9.73	7.87	2.19

Provides: Mgr. Lenka Klimčáková, Mgr. Viktória Mária Slovenská, Mgr. Zuzana Naďová

Date of last modification: 14.02.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/BSSMI/15	**Course name:** Essentials of Informatics

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

Number of ECTS credits: 1

Recommended semester/trimester of the course:

Course level: I.

Prerequisities: ÚINF/PSIN/15,ÚINF/PAZ1b/15,ÚINF/OSY1/15,ÚINF/AFJ1a/15,ÚINF/SLO1a/15

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 8

A	B	C	D	E	FX
12.5	25.0	12.5	0.0	50.0	0.0

Provides:

Date of last modification: 16.06.2017

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ MHG1/07	**Course name:** Fieldwork in Human Geography

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

Number of ECTS credits: 3

Recommended semester/trimester of the course: 6.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 556

A	B	C	D	E	FX
94.06	2.16	1.44	1.44	0.72	0.18

Provides: RNDr. Stela Csachová, PhD., Mgr. Marián Kulla, PhD., RNDr. Janetta Nestorová-Dická, PhD., Mgr. Loránt Pregi, PhD.

Date of last modification: 31.03.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ HYP/15	**Course name:** Fieldwork in 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 ECTS 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: 78

A	B	C	D	E	FX
93.59	5.13	0.0	1.28	0.0	0.0

Provides: RNDr. Dušan Barabas, CSc.

Date of last modification: 09.11.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ GEP2/18	**Course name:** Fundamentals of Geology for Geographers

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 ECTS credits: 6

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: 1075

A	B	C	D	E	FX
7.07	16.0	32.0	27.81	11.26	5.86

Provides: doc. Ing. Katarína Bónová, PhD., Ing. Ján Bóna

Date of last modification: 28.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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 ECTS 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: 668

A	B	C	D	E	FX
5.24	12.72	20.66	23.95	35.18	2.25

Provides: RNDr. Dušan Barabas, CSc., Mgr. Imrich Sládek, PhD., Mgr. Ján Šašak, PhD.

Date of last modification: 19.08.2020

Approved:

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 ECTS credits: 6

Recommended semester/trimester of the course: 5.

Course level: I., II.

Prerequisities:

Conditions for course completion:
The assessment is a combination of continual control during the practicals and the final exam in the examination period. The continual assessment is performed during the semester and it involves 1 written test in the mid-term of the semester and a project report generated according to the assignment and practical skills acquired during the practicals. The student can go for the final exam in case he or she acquired at least the E mark in the continual assessment. The final assessment mark is the result of the average of the marks received in the mid-term test, project report and final exam. The final exam is a written test. The credits are given in case the student had reached at least the E mark in continual assessment and final exam. The following marking scheme is applied in the assessment: A (100-90 points), B (80-89 points), C (70-79 points), D (60-69 points), E (50-59 points), FX (0-49 points).

Learning outcomes:
The student will understand the basics of the theory of geoinformation science, GIS, and Remote Sensing. The student will be able perform tasks in a GIS software, generate thematic amps and conduct basic spatial analyses such as spatial querries, atribute querries, terrain modelling, editing custom geodata, importing geodata.

Brief outline of the course:

Recommended literature:

Course language:
Slovak or Czech or English

Notes:

Course assessment
Total number of assessed students: 344

A	B	C	D	E	FX
29.65	25.0	25.58	13.37	6.4	0.0

Provides: doc. Mgr. Michal Gallay, PhD., Mgr. Michaela Nováková

Date of last modification: 16.09.2017

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ GEOM/15	**Course name:** Geography

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

Number of ECTS 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: 157

A	B	C	D	E	FX
14.01	22.93	24.84	17.2	19.75	1.27

Provides:

Date of last modification: 02.06.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ MG/18	**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 ECTS credits: 2

Recommended semester/trimester of the course: 3.

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 the Slovak and world mning from a geographical point of view.

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:
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 notes

Course assessment
Total number of assessed students: 9

A	B	C	D	E	FX
77.78	11.11	11.11	0.0	0.0	0.0

Provides: prof. Ing. Vladimír Sedlák, PhD.

Date of last modification: 19.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ OBY2/18	**Course name:** Geography of population and settlements

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 ECTS credits: 6

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: 838

A	B	C	D	E	FX
8.71	14.2	21.84	22.91	28.76	3.58

Provides: RNDr. Janetta Nestorová-Dická, PhD., doc. Mgr. Michal Gallay, PhD.

Date of last modification: 21.02.2018

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/GCR/12	**Course name:** Geography of the Czech Republic

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 ECTS 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:
Introduction, location, basic FG features of the Czech Republic. Geological structure of the Czech Republic, main geological entities according to the newest classification. Geomorphological structure and the relief evolution, geomorphological entities and units. Climate, hydrography of the Czech Republic, underground waters and mineral waters. Soils, phytogeography and zoogeography, present landscape types.
History of settlements in the Czech Republic from the historical perspective. National, linguistic and religious structure. Urban and rural settlements. Administrative division and its historical development. Economiy of the country - natural resouces, agriculture, industry, transport, education and tourism.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 284

A	B	C	D	E	FX
52.46	31.34	13.73	2.46	0.0	0.0

Provides: Mgr. Marián Kulla, PhD., Mgr. Imrich Sládek, PhD.

Date of last modification: 28.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

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 ECTS 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.
COE, A. L. (ed.) et al., 2010: Geological Field techniques. Wiley-Blackwell, UK, 323 pp.

Course language:

Notes:

Course assessment
Total number of assessed students: 469

A	B	C	D	E	FX
81.88	13.65	2.77	0.0	0.0	1.71

Provides: doc. Ing. Katarína Bónová, PhD.

Date of last modification: 26.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ GMAP/13	**Course name:** Geomorphological mapping

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 ECTS credits: 2

Recommended semester/trimester of the course: 4.

Course level: I., II.

Prerequisities:

Conditions for course completion:
The evaluation of the subject consists of assesment of one main semestral work - geomorphological map of the area (50 points) and 2-3 partial works (50 points), the total amount of points is 100. The student has to aquire minimum of half points from each work. For successful graduation of the subject the student has to aquire 51 points and more.

Learning outcomes:
after the graduation of the subject the student should information applied to the praxis and be able to map area with the main aim of high quality map and the legenda.

Brief outline of the course:
The main of the subject is to understand the topic of the geomorphological mapping, geomorphological map and its importance. It deals with the history of the geomorphological mapping, maps in slovak and foreign literature, about theory and praxis of field works and maps compilation, creating of the geomorphological map legenda for different relief types. With help of graphical softwers we are working with morphometric and morphographic relief characeter, the morphogenetical nad morphodynamical interpretation of the geomorphological map. After the theoretical part of seminars there is practical field mapping in the scale of 1: 10 000 at the and of the semester.

Recommended literature:
DEMEK, J. (edit.), 1972: Manual of detailed geomorphological mapping. Academia, Brno, 344 s.
MINÁR, J., 1995: Niektoré teoreticko-metodologické problémy geomorfológie vo väzbe na tvorbu komplexných geomorfologických máp. Acta Facultatis Rerum Naturalium Universitatis Comenianae, Geographica Nr. 36, Bratislava, 7-125.
SMITH, M., PARON P., GRIFFITHS, J., 2011: Geomorphological mapping – methods and applications. School of Geography, Geology and the Environment, Kingston University, UK. 610 s.
URBÁNEK, J., 1997: Geomorfologická mapa: niektoré problémy geomorfologického mapovania na Slovensku. Geografický časopis, 49, 3-4, 175-186.
ZAŤKO, M. et al. 1986: Obecná geomorfologická mapa a jej legenda. In: Cvičenia z fyzickej geografie. Prírodovedecká fakulta Univerzity Komenského, Bratislava. 43-53.

Course language:

Notes:

Course assessment
Total number of assessed students: 13

A	B	C	D	E	FX
84.62	0.0	15.38	0.0	0.0	0.0

Provides: RNDr. Alena Gessert, PhD.

Date of last modification: 27.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ GEM2/18	**Course name:** Geomorphology

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 ECTS credits: 6

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: 1241

A	B	C	D	E	FX
10.23	21.84	21.35	16.36	20.15	10.07

Provides: RNDr. Alena Gessert, PhD., Mgr. Imrich Sládek, PhD.

Date of last modification: 27.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KF/ 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 ECTS 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: 742

A	B	C	D	E	FX
60.78	13.88	12.67	8.63	3.37	0.67

Provides: Doc. PhDr. Peter Nezník, CSc., PhDr. Katarína Mayerová, PhD., doc. Mgr. Róbert Stojka, PhD.

Date of last modification: 25.03.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ EXHG1/15	**Course name:** Human 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 ECTS 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: 733

A	B	C	D	E	FX
80.63	10.23	6.68	0.95	0.82	0.68

Provides: RNDr. Stela Csachová, PhD., Mgr. Marián Kulla, PhD., doc. Mgr. Ladislav Novotný, PhD., RNDr. Janetta Nestorová-Dická, PhD.

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ HGS/15	**Course name:** Human Geography of Slovakia

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 ECTS credits: 5

Recommended semester/trimester of the course: 6.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 490

A	B	C	D	E	FX
3.88	10.82	18.37	36.53	25.92	4.49

Provides: Mgr. Marián Kulla, PhD., RNDr. Janetta Nestorová-Dická, PhD., Mgr. Loránt Pregi, PhD., prof. Mgr. Jaroslav Hofierka, PhD.

Date of last modification: 31.03.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ HUGN/15	**Course name:** Human geography (Non-production Systems)

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

Number of ECTS 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.
GOELDNER, CH.R., BRENT RICHIE, J.R., 2014: Cestovní ruch - principy, příklady, trendy. Biz books, 545 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: 477

A	B	C	D	E	FX
15.72	23.69	27.88	20.55	10.9	1.26

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

Date of last modification: 20.09.2018

Approved:

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 ECTS 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: 662					
A	B	C	D	E	FX
7.7	21.15	29.61	27.64	11.78	2.11
Provides: Mgr. Marián Kulla, PhD., Mgr. Martina Gregáňová, prof. Ing. Vladimír Sedlák, PhD.					
Date of last modification: 29.03.2020					
Approved:					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPE/ INP/17	**Course name:** Inclusive Pedagogy

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

Number of ECTS 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: 42

A	B	C	D	E	FX
83.33	16.67	0.0	0.0	0.0	0.0

Provides: PaedDr. Janka Ferencová, PhD.

Date of last modification: 08.06.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ IKTP/15	**Course name:** Information and Communication Technologies

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

Number of ECTS credits: 2

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

Course level: I.

Prerequisities:

Conditions for course completion:
Problems solved during the semester. A final project using presentation programs, spreadsheet programs, text processors, internet resources and search tools. The ECDL certificate (all 7 modulus) is accepted as the exam with the ranking "A-výborne".

Learning outcomes:
To achieve and extend fundamental information and communication knowledge to the level which is acceptable in the EU region.

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

Recommended literature:
1. Franců, M: Jak zvládnout testy ECDL. Praha : Computer Press, 2007. 160 s. ISBN 978-80-251-1485-8.
2. Jančařík, A. et al.: S počítačem do Evropy – ECDL. 2. vydanie. Praha : Computer Press, 2007. 152 s. ISBN 80-251-1844-3.
3. Kolektív autorov: Sylabus ECDL verzia 5.0. [on-line] [citované 9.2.2010]. Dostupné na internete: <http://www.ecdl.sk/buxus/docs//interne_informacie/Sylabus_V5.0/20090630ECDL-SylabusV50_SK-V01_FIN.pdf>.

Course language:

Notes:

Course assessment
Total number of assessed students: 1022

A	B	C	D	E	FX
65.46	17.71	6.95	3.62	1.66	4.6

Provides: Mgr. Alexander Szabari, PhD., doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 03.05.2015
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ IBdi/15	**Course name:** Information security principles

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 ECTS credits: 3

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: 28

A	B	C	D	E	FX
25.0	21.43	25.0	10.71	3.57	14.29

Provides: RNDr. JUDr. Pavol Sokol, PhD.

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ZAE1/18	**Course name:** International Excursion 1

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: Per study period: 10d
Course method: present

Number of ECTS credits: 5

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: 5

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

Provides:

Date of last modification: 09.12.2019

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ UGIS/15	**Course name:** Introduction to Geographic Information Systems

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

Number of ECTS credits: 3

Recommended semester/trimester of the course: 2.

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 understanding of GIS terminology, practical skills in basic geodata processing in GIS software. In particular, the skills involve data edtiting and creation of map layouts.

Brief outline of the course:
- Basic GIS terminology (eg. geodata layer, geodata formats, structure of GIS, graphics map elements, attribute table, structure of relational databases)
- Basic control elements of GIS software (add and configure a data layer and properties, zooming, adjusting color data layer, display and basic work with attribute tables)
- Prepare and connect an external database with the data layer
- Set the legend (selection of cartographic methods of spatial information)
- Creating map layouts and advanced graphics tools for creating map layouts

Recommended literature:
BOLTIŽIAR M. 2008: Geografické informačné systémy pre geografov I. Univerzita Konštantína Filozofa v Nitre, Fakulta Prírodných vied. 120 s.
BOLTIŽIAR, M. VOJTEK M. 2009. Geografické informačné systémy pre geografov II. Univerzita Konštantína Filozofa v Nitre, Fakulta Prírodných vied. 140 s.
MICHAEL D. KENNEDY. 2013:Introducing Geographic Information Systems with ArcGIS: A Workbook Approach to Learning GIS, 3rd Edition. Wiley. 672 p.
LAW M, COLLINS A. 2013:Getting to Know ArcGIS for Desktop. Edition 3. Esri Press. 768 p.

Course language:

Notes:

Course assessment
Total number of assessed students: 882

A	B	C	D	E	FX
13.83	14.06	25.85	22.9	20.52	2.83

Provides: doc. Mgr. Michal Gallay, PhD., doc. RNDr. Ján Kaňuk, PhD., Mgr. Michaela Nováková

Date of last modification: 28.03.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ UGP/18	**Course name:** Introduction to Geography and 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 ECTS credits: 2

Recommended semester/trimester of the course: 1.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 446

A	B	C	D	E	FX
36.1	27.58	18.16	12.11	5.83	0.22

Provides: prof. Mgr. Jaroslav Hofierka, PhD., prof. Ing. Vladimír Sedlák, PhD., Mgr. Štefan Kolečanský

Date of last modification: 17.09.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: Dek. PF UPJŠ/USPV/13	**Course name:** Introduction to Study of Sciences
Course type, scope and the method: **Course type:** Lecture / Practice **Recommended course-load (hours):** **Per week: Per study period:** 12s / 3d **Course method:** present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: I.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 1734	
abs	n
86.51	13.49
Provides: doc. RNDr. Marián Kireš, PhD.	
Date of last modification: 25.09.2019	
Approved:	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of ECTS credits: 5

Recommended semester/trimester of the course: 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:

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

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

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

Course language:

Notes:

Course assessment
Total number of assessed students: 297

A	B	C	D	E	FX
13.8	10.44	13.8	23.57	29.97	8.42

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

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ UIB1/17	**Course name:** Introduction to information security

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 ECTS credits: 3

Recommended semester/trimester of the course: 3.

Course level: I., N

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 56

A	B	C	D	E	FX
37.5	37.5	14.29	7.14	1.79	1.79

Provides: RNDr. JUDr. Pavol Sokol, PhD.

Date of last modification: 27.03.2019

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of ECTS credits: 5

Recommended semester/trimester of the course: 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:
The condition for passing the course is the realization of a project with the application of neural networks, successful completion of two written tests in the field of neural networks and genetic algorithms, as well as successful completion of the written and oral part of the exam.

Learning outcomes:
The result of the education is an understanding of the basic principles of neural networks and genetic algorithms. The student will gain the ability to apply the acquired knowledge in intelligent data analysis and also work with a selected tool for modeling neural networks.

Brief outline of the course:
1. Basic concept arising from biology. Linear threshold units, polynomial threshold units, functions calculable by threshold units.
2. Perceptrons. Linear separable objects, adaptation process (learning), convergence of perceptron learning rule, higher order perceptrons.
3. Forward neural networks, hidden neurons, adaptation process (learning), backpropagation method.
4. Recurrent neural networks. Hopfield neural networks, properties, associative memory model, energy function, learning, optimization problems (business traveler problem).
5. Model of gradually created network. ART network, architecture, operations, initialization phase, recognition phase, search and adaptation phase. Use of the ART network.
6. Applications of studied models in solving practical problems.
7. Written test I.
8. Motivation to model genetic elements. Genetic algorithm. Application of genetic algorithms.
9. Genetic programming, root trees, Read's linear code. Basic stochastic optimization algorithms: blind algorithm and climbing algorithm. Forbidden search method.
10. Genetic and evolutionary programming with typing, examples of use. Grammatical evolution.
11. Special techniques of evolutionary computations. Selection mechanisms in evolutionary algorithms.
12. Use of genetic algorithms in training neural networks. Artificial life.
13. Written test II.

Recommended literature:

1. AGGARWAL, Charu C. Neural networks and deep learning: a textbook. Cham: Springer, 2018. ISBN 978-3319944623.
2. KVASNIČKA, Vladimír. Úvod do teórie neurónových sietí. [Slovenská republika]: IRIS, 1997. ISBN 80-88778-30-1.
3. KVASNIČKA, Vladimír. Evolučné algoritmy. Bratislava: Vydavateľstvo STU, 2000. Edícia vysokoškolských učebníc. ISBN 80-227-1377-5.
4. MITCHEL, Melanie. An Introduction to Genetic Algorithms. Cambridge: MIT Press, 2002. ISBN 0-262-63185-7.
5. SINČÁK, Peter, ANDREJKOVÁ, G. Úvod do neurónových sietí, I. diel, Košice: ELFA, 1996. ISBN 808878638X

Course language:
Slovak or English

Notes:
Content prerequisites:
Basics of programming in Python, or another alternative programming language suitable for data analysis

Course assessment
Total number of assessed students: 439

A	B	C	D	E	FX
14.12	17.08	22.55	19.13	22.78	4.33

Provides: RNDr. Ľubomír Antoni, PhD., RNDr. Šimon Horvát

Date of last modification: 26.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ UIN1/15	**Course name:** Introduction to study of informatics

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

Number of ECTS credits: 5

Recommended semester/trimester of the course: 1.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 284

A	B	C	D	E	FX
43.31	17.25	13.38	8.45	3.17	14.44

Provides: prof. RNDr. Stanislav Krajči, PhD., doc. RNDr. Ondrej Krídlo, PhD.

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ LOS/18	**Course name:** Linux and open source GIS

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 ECTS credits: 3

Recommended semester/trimester of the course: 3.

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 44

A	B	C	D	E	FX
70.45	29.55	0.0	0.0	0.0	0.0

Provides: doc. Mgr. Michal Gallay, PhD., prof. Mgr. Jaroslav Hofierka, PhD., Mgr. Michaela Nováková

Date of last modification: 29.08.2018

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ MZIa/10	**Course name:** Mathematical foundations of informatics 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 ECTS credits: 6	
Recommended semester/trimester of the course: 1.	
Course level: I.	
Prerequisities:	
Conditions for course completion: Two tests and completion of individual homework. Assessment is given on the basis of semestral evaluation and examination test.	
Learning outcomes: To obtain basic mathematical knowledge in arithmetic, linear algebra and elementary calculus. To become familiar with the applications of some fundamental mathematical concepts. To learn to work with mathematical software and together with the acquired knowledge to use it in solving various types of problems.	
Brief outline of the course: Integers and divisibility. Prime numbers and congruences. Applications of congruences and congruence classes. Matrices and determinants. Applications of matrices and determinants. Functions and their properties. Elementary functions. Limit of a function. Continuity and derivative of a function. Applications of derivatives.	
Recommended literature: Hallet D. H. (2014). Applied Calculus. John Wiley & Sons. Koshy T. (2007). Elementary Number Theory with Applications. Elsevier. Lay D. C. (2012). Linear Algebra And Its Applications. Boston: Addison-Wesley. Studenovská D., Madaras T. (2006). Matematika pre nematematické odbory. UPJŠ. Studenovská D., Madaras T., Mockovciak S. (2006). Zbierka úloh z matematiky pre nematematické odbory. UPJŠ. Zimmermann P. et al. (2018). Computational Mathematics with SageMath. Springer.	
Course language: Slovak	
Notes:	

Course assessment
Total number of assessed students: 197

A	B	C	D	E	FX
0.51	9.64	9.64	19.29	47.72	13.2

Provides: RNDr. Andrej Gajdoš, PhD.

Date of last modification: 19.09.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚMV/ MZIb/10	**Course name:** Mathematical foundations of informatics 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 ECTS credits: 6

Recommended semester/trimester of the course: 2.

Course level: I.

Prerequisities: ÚMV/MZIa/10

Conditions for course completion:
Based on results of two tests and individual homeworks.
Based on semestral evaluation and examination test.

Learning outcomes:
To extend the obtained knowledge in mathematics by topics in integral calculus, differential equations and infinite series.

Brief outline of the course:
Indefinite and definite integral and their applications. Differential equations. Series, convergence criteria. Series of functions, Taylor expansion. Periodic functions, trigonometric series, Fourier expansion.

Recommended literature:
Huťka, Benko, Ďurikovič: Matematika, Alfa, Bratislava 1991
D. Studenovská, T. Madaras, S. Mockovčiak: Zbierka úloh z matematiky pre nematematické odbory, UPJŠ 2006
D. Studenovská, T. Madaras: Matematika pre nematematické odbory, UPJŠ 2006
J. Ivan: Matematika 2, Alfa, Bratislava 1989
T. Katriňák a kol.: Algebra a teoretická aritmetika, Alfa, Bratislava 1986

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 123

A	B	C	D	E	FX
2.44	9.76	8.94	22.76	49.59	6.5

Provides: RNDr. Andrej Gajdoš, PhD.

Date of last modification: 03.05.2015

Approved:

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 ECTS credits: 3

Recommended semester/trimester of the course:

Course level: I.

Prerequisities:

Conditions for course completion:
Elaboration and presentation of a semester work with a weight of 70% of the total evaluation, passing a final test with a success rate of over 50% and a weight of 30% of the total evaluation. The course consists of theoretical and practical part. In the theoretical part, students are presented with the basic knowledge necessary to master the practical part - semester work, which the student demonstrates independent mastery of the issue.

Learning outcomes:
Ability to analyze and synthesize a selected micro-region (local country) for the needs of state administration, self-government and teaching practice.

Brief outline of the course:
1. Theory and methodology of the subject, object and subject of microgeography.
2. Historical development and present of microgeography; genius loci, identity with territory
3. - 4. Differentiation of the landscape sphere on the example of a selected microregion I. - physical geography (location and delimitation of the area - geological conditions - relief - climate - water - soils - flora - fauna)
5. - 6. Differentiation of the landscape sphere on the example of a selected microregion II. - human geography (population - settlement structure - production sphere - non-production sphere).
7. Presentation of the first part of the semester work - physical geography
8. Regionalization; microregional associations of municipalities, local action groups, examples of microregions in the Košice region
9. - 10. Application of knowledge of microgeography in practice (in state administration, self-government and teaching practice),
11. Presentation II. parts of semester work - human geography
12. Final test
13. Final evaluation

Recommended literature:
DUBCOVÁ, A. 2012: Mikrogeografia – krajina okolo nás, UKF Nitra, 185 s.
HASPROVÁ, M. 2006: Geografia miestnej krajiny v edukačnom procese, UKF Nitra, 203 s.
KANDRÁČOVÁ, V., MICHAELI, E. 1996: Mikrogeografia v edukácii, výskume a pre prax.

In: Krajina východného Slovenska v odborných a vedeckých prácach. Prešov: KGG PdF UPJŠ, 1997, s. 265 – 285
KROPILÁK, M. (ed.) 1977: Vlastivedný slovník obcí na Slovensku I. 1. vyd. Bratislava : Veda, 526 s.
KROPILÁK, M. (ed.) 1977: Vlastivedný slovník obcí na Slovensku II. 1. vyd. Bratislava : Veda, 517 s.
KROPILÁK, M. (ed.) 1978: Vlastivedný slovník obcí na Slovensku III. 1. vyd. Bratislava : Veda, 532 s.
LUKNIŠ, M., 1977: Geografia krajiny Jura pri Bratislave. UK, Bratislava. 211 s.
Ďalšia literatúra podľa zvoleného územia

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 80

A	B	C	D	E	FX
45.0	41.25	11.25	2.5	0.0	0.0

Provides: Mgr. Imrich Sládek, PhD.

Date of last modification: 28.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ NSGE/15	**Course name:** Mineral Resources - geological and environmental relations

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

Number of ECTS credits: 4

Recommended semester/trimester of the course: 6.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 113

A	B	C	D	E	FX
46.9	20.35	17.7	11.5	0.88	2.65

Provides: doc. Ing. Katarína Bónová, PhD.

Date of last modification: 26.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KPE/ MMKV/17	**Course name:** Multiculturalism and Multicultural 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 ECTS 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: 119

A	B	C	D	E	FX
43.7	37.82	16.81	0.84	0.84	0.0

Provides: PaedDr. Michal Novocký, PhD.

Date of last modification: 08.06.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/OSY1/15	**Course name:** Operating systems
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 ECTS credits: 3	
Recommended semester/trimester of the course: 3.	
Course level: I.	
Prerequisities: ÚINF/PRP2/15,(ÚINF/PAZ1a/15 and leboÚINF/ePAZ1a/15 and leboÚINF/PRG1/15)	
Conditions for course completion: Test and oral exam	
Learning outcomes: To gain knowledge about the basic architecture of the operating system. Understand algorithms for multi-process CPU allocation, interprocess communication, and memory allocation. To be able to apply basic synchronization procedures and to solve problems of allocation of common resources for I / O operations. Understand the organization of files and their protection by access rights. To be able to practically use the services of the Unix and Windows operating system.	
Brief outline of the course: Operating system structure and basic functions. Different kinds of operating systems and their history. Multiprogramming, context switching, interrupts, time sharing, interoperability. Processes, process management, threads, scheduling, interprocess communication (race condition, mutual exclusion, deadlock, starvation). Memory management, relocation, segmentation, paging, virtual memory. I/O management, device drivers, interrupt handlers. External memory (disk) - direct and sequential access. File systems, file operations, directories, access control, access rights.	
Recommended literature: 1. A. Silberschatz, G. Gagne, P. Baer: Operating System Concepts, Wiley, 2002 2. A. S. Tanenbaum: Modern Operating Systems, Prentice-Hall, 2001	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 304

A	B	C	D	E	FX
22.37	21.71	19.08	25.0	10.53	1.32

Provides: RNDr. PhDr. Peter Pisarčík

Date of last modification: 14.01.2020

Approved:

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 ECTS 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: 639

A	B	C	D	E	FX
20.03	27.07	25.98	15.65	10.49	0.78

Provides: PaedDr. Michal Novocký, PhD.

Date of last modification: 08.06.2021

Approved:

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 ECTS 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: 738

A	B	C	D	E	FX
89.97	7.86	1.22	0.14	0.41	0.41

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

Date of last modification: 19.08.2020

Approved:

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 ECTS 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: 488

A	B	C	D	E	FX
21.52	28.07	31.15	13.32	3.89	2.05

Provides: RNDr. Alena Gessert, PhD., Mgr. Jozef Šupinský, PhD.

Date of last modification: 01.09.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/FYG1/18	**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 ECTS credits: 6

Recommended semester/trimester of the course: 3.

Course level: I.

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: 739

A	B	C	D	E	FX
2.3	5.28	20.84	27.74	36.4	7.44

Provides: RNDr. Dušan Barabas, CSc., RNDr. Alena Gessert, PhD., Mgr. Imrich Sládek, PhD., Mgr. Ján Šašak, PhD.

Date of last modification: 19.08.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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 ECTS credits: 5

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:
Atmosphere:
1. Introduction to the study of meteorology and climatology (basic terms and definitions, history of meteorology and climatology in the world and in Slovakia, methods of obtaining data on weather and climate)
2. Atmosphere (composition and vertical division of the atmosphere, temperature and radiation balance)
3. Meteorological elements (solar radiation, air temperature, water in the atmosphere - air humidity, air pressure, air flow - wind)
4. Global atmospheric circulation (tropical and mimotropic circulation, air masses and atmospheric fronts)
5. Global climate (Earth's climate system, climate classifications in the world and in Slovakia)
6. Climate change (climate change in the geological history of the Earth, current climate change)
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: 693

A	B	C	D	E	FX
29.15	27.99	25.54	10.97	5.92	0.43

Provides: RNDr. Alena Gessert, PhD., Mgr. Imrich Sládek, PhD., RNDr. Dušan Barabas, CSc.
Date of last modification: 28.08.2020
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ POL1/18	**Course name:** Political geography and geopolitics
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 ECTS credits: 5	
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: 321

A	B	C	D	E	FX
43.93	31.46	16.2	6.23	1.87	0.31

Provides: RNDr. Stela Csachová, PhD.	
Date of last modification: 12.09.2020	
Approved:	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ PVS/18	**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 ECTS credits: 5	
Recommended semester/trimester of the course: 4.	
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
Total number of assessed students: 138

A	B	C	D	E	FX
58.7	5.8	15.22	7.97	9.42	2.9

Provides: RNDr. Janetta Nestorová-Dická, PhD., prof. Ing. Vladimír Sedlák, PhD.

Date of last modification: 29.03.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: 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 ECTS credits: 2

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

Course level: I.

Prerequisities:

Conditions for course completion:
Assessment is based on interim evaluation. The subject will be taught in both present and distance format. Up-to-date information concerning the subject for the given academic year can be found on the electronic board of the subject in the Academic information system of the UPJŠ.

Learning outcomes:
The aim of the course is to leanrn about the the basic theory and current research, as well as the possibility of application of Positive Psychology as a new and rapidly developing field of psychology. The aim of the subject is mainly to develop and apply critical thinking to the challenges and issues that Positive Psychology brings and raises in the context of the individual in contemporary society. Emphasis is placed on the ability to independently and critically process current topics of positive psychology.

Brief outline of the course:
1. Different perspectives on well-being nad happiness in psychology
2. Main theoretical approaches to positive psychology
3. Positive emotions and positivity
4. Meaningfulness
5. Positive interpersonal relations
6. Post-traumatic growth
7. Hope and optimism
8. Gratitude
9. Spirituality as a personality dimension
10. Wisdom
11. Positive institutions
12. New themes and topics in PP

Recommended literature:
Brewer, M. B, Hwestone, M: Emotion and Motivation, Blackwell, 2004
Deci, E., Ryan R. M., Handbook of Self – Determination Reasearch, Rochester, 2002
Křivohlavý, J.: Pozitivní psychologie. Praha, Portál, 2003
Křivohlavý, J.: Psychologie vděčnosti a nevděčnosti. Praha, Grada, 2007
Křivohlavý, J.: Psychologie moudrosti a dobrého života, Praha, Grada, 2012

Křivohlavý, J.: Psychologie pocitu štěstí, Grada, 2013
McAdams, D. P., The Person, New York, 2002
Seligman, M. E. P., & Csikszentmihalyi, M. (Eds.). (2000). Positive psychology [Special issue] American Psychologist, 55(1).
Říčan, P.: Psychologie náboženství a spirituality, Praha, Portál, 2007
Slezáčková, A.:Pruvodce pozitivní psychologií, Praha, Grada, 2012

Course language:

Notes:

Course assessment
Total number of assessed students: 280

A	B	C	D	E	FX
98.21	1.07	0.36	0.0	0.36	0.0

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

Date of last modification: 25.06.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PRP2/15	**Course name:** Principles of computers

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

Number of ECTS credits: 4

Recommended semester/trimester of the course: 2.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:
- Know brief history of computer, classification and construction principles of computers of von Neumann type.
- Understand relation between real numbers, integers and their binary representation as well as be able to perform basic arithmetic and logic operations over binary represented numbers.
- Learn basics about logic gates, combination and sequence circuits and their structure. Understand principles of how basic circuits realize arithmetic-logic unit and other parts of computers e.g. memory.
- Know principles of communication of processor and other devices via interruptions and direct memory access.
- Get idea of device drivers, device controllers and their functionality.

Brief outline of the course:
Brief outline of the course:
- computers of von Neumann type,
- history of computers,
- binary encoding of real numbers and integers,
- realization of computers parts by sequence and combination circuits,
- principles of various memory cells and memory matrices,
- types of memories,
- architecture of processor on levels of digital logic, machine cycle, instruction cycle,
- input and output devices,
- principles of interruptions,
- direct memory access,
- device drivers,
- device controllers,
- peripheral devices.

Recommended literature:
1. STALLINGS, William. Computer Organization and Architecture. Prentice Hall, 2002. ISBN 978-0-13-410161-3.

Course language:

Notes:

Course assessment
Total number of assessed students: 242

A	B	C	D	E	FX
26.03	15.7	16.53	13.22	23.14	5.37

Provides: RNDr. Juraj Šebej, PhD.

Date of last modification: 09.07.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ PBS/15	**Course name:** Pro-seminar to bachelor thesis

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

Number of ECTS credits: 1

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities:

Conditions for course completion:
Creating a website about a bachelor's thesis. Selection of bachelor thesis topic. Presentation of the bachelor's thesis assignment and its objectives. Preparation of an essay in the extent of 1 page on the motivation to select a bachelor's thesis. Creation of the bachelor's thesis assignment and its insertion into the AIS by the thesis supervisor.

Learning outcomes:
Basic knowledge of the principles of creation and structure of bachelor's theses. Criteria and requirements for selecting an appropriate bachelor thesis topic. Knowledge about the structure of the bachelor's thesis assignment.

Brief outline of the course:
1. Principles in creating a final thesis.
2. The presentations of bachelor thesis topics by potential supervisors.
3. The presentations of bachelor thesis topics by potential supervisors.
4. The presentations of bachelor thesis topics by potential supervisors.
5. Bachelor thesis and its objectives.
6. Assignment of bachelor thesis.
7. Basic types of bachelor theses.
8. Structure of different types of bachelor theses.
9. Requirements for final bachelor theses.
10. External company final theses.
11. Presentation of selected topics of final theses.
12. Presentation of selected topics of final theses.
13. Presentation of selected topics of final theses.

Recommended literature:
1. STN 01 6910. Rules of writing and editing documents. 2011.
2. STN ISO 2145. Documentation. Numbering of sections and subsections of written documents. 1997.
3. STN ISO 690. Information and documentation. Instructions for creating bibliographic references to information sources and their citation. 2012
4. KATUŠČÁK, Daniel. How to write final and qualification theses. Enigma, 2013

5. Scientific literature related to the topic of the final thesis according to the recommendation of the thesis supervisor.

Course language:
Slovak or English

Notes:

Course assessment
Total number of assessed students: 307

abs	n
94.14	5.86

Provides: RNDr. Ľubomír Antoni, PhD.

Date of last modification: 26.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ SPP1a/15	**Course name:** Programming environments in schools 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 ECTS credits: 4

Recommended semester/trimester of the course: 3.

Course level: I.

Prerequisities: ÚINF/PAZ1a/15

Conditions for course completion:
At least 50 % of the marks in the intermediate assessment
A minimum of 50 % marks in the mid-term and end-of-semester practical tests

Learning outcomes:
Ability to implement more complex algorithms algorithms in the Python programming language. Ability to design and program educational software in the Python programming language. Formulate and solve school computer science problems.

Brief outline of the course:
1. Introduction to Python, basic features of Python, syntax.
2. Simple data types (number, logical type), structured types (string, list, dictionary, set, tuple).
3. Control structures (loops, conditional statements, exception management).
4. Function definition (parameters, return value), function documentation.
5. Import and creation of modules.
6. Error types and error condition handling. Exception handling and raising.
7. Saving data to a file and reading data from a file. Data serializing. Open data and its analysis.
8. Testing the correctness of algorithms (doctest, unittest), test data.
9. Object-oriented programming. Design and implementation of custom classes.
10. Creation of graphical interface of programs.
11. Design criteria, design and programming of educational software.
12. Solving more complex algorithmic problems from real life or school practice using the object-oriented approach and the resources of the Python programming language.

Recommended literature:
PILGRIM, Mark. Ponořme se do Python(u) 3: Dive into Python 3. 1. Praha: CZ.NIC, c2010, 430 s. CZ.NIC. ISBN 978-80-904248-2-1. Dostupné také z: http://knihy.nic.cz/files/nic/edice/mark_pilgrim_dip3_ver3.pdf
SHIPMAN, John W. Tkinter 8.5 reference: a GUI for Python. Socorro, NM 87801: New Mexico Tech Computer Center, 2013. Dostupné také z: https://anzeljg.github.io/rin2/book2/2405/docs/tkinter/tkinter.pdf

GUNIŠ, Ján, Viera MICHALIČKOVÁ, Martin CÁPAY a Ľubomír ŠNAJDER. Riešenieproblémov a programovanie. Bratislava: Centrum vedecko-technických informácií SR, 2020.ISBN 978-80-89965-62-5.
HETLAND, Magnus Lie. Beginning Python: from novice to professional. New York: Distributed to the book trade worldwide by Springer-Verlag, c2005. ISBN 1-59059-519-X.
KRNÁČ, Jozef, Miloslava SUDOLSKÁ a Ľudovít TRAJTEĽ. Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Učiteľ s kompetenciami programátora. Bratislava: Štátny pedagogický ústav Bratislava, 2010. ISBN 978-80-8118-083-5.

Course language:
Slovak language, knowledge of English is only required to read Python documentation.

Notes:

Course assessment
Total number of assessed students: 23

A	B	C	D	E	FX
8.7	21.74	43.48	8.7	13.04	4.35

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

Date of last modification: 31.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ SPP1b/15	**Course name:** Programming environments in schools 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 ECTS credits: 4

Recommended semester/trimester of the course: 6.

Course level: I.

Prerequisities: ÚINF/SPP1a/15

Conditions for course completion:
Conditions for ongoing evaluation:
1. Educational software or game programmed in the Scratch environment,
2. A programming etude created for learning of programming in the MIT App Inventor environment.
3. Educational or assistive software programmed in the MIT App Inventor environment.
4. A programmed project using the BBC micro: bit kit.
Conditions for successful completion of the course:
Obtaining at least 50% of points for ongoing assignments.

Learning outcomes:
After completing this course, students are able to:
a) get an overview of educational programming environments,
b) acquire programming skills in selected educational programming environments,
c) develop the ability to design and program educational software for devices using their sensors and actuators.

Brief outline of the course:
1. Teaching algorithmization and programming in primary and secondary school - objectives, content, textbooks and methodological materials. Algorithmic computer games.
2. Programming in the Scratch environment.
3. Programming in the Scratch environment.
4. Programming in the Scratch environment.
5. Programming of mobile devices in the MIT App Inventor environment.
6. Programming of mobile devices in the MIT App Inventor environment.
7. Programming of mobile devices in the MIT App Inventor environment.
8. Programming of mobile devices in the MIT App Inventor environment.
9. Programming of mobile devices in the MIT App Inventor environment.
10. Programming BBC micro: bit kits in MS MakeCode environment.
11. Programming BBC micro: bit kits in MS MakeCode environment.
12. Overview of educational programming initiatives and development environments.

Recommended literature:

BELL, Charles A., 2017. Micropython for the internet of things: a beginner's guide to programming with Python on microcontrollers. New York, NY: Springer Science+Business Media. ISBN 9781484231227.
GUTSCHANK, Jörg et al., 2019. Coding in STEM Education [online]. Berlin: Science on Stage Deutschland e.V., 76 p. [cited 2021-7-10]. ISBN 978-3-942524-58-2. Available from: https://www.science-on-stage.eu/sites/default/files/material/coding_in_stem_education_en_2nd_edition.pdf
ŠNAJDER, Ľubomír, Gabriela LOVÁSZOVÁ, Viera MICHALIČKOVÁ and Ján GUNIŠ, 2020. Programovanie mobilných zariadení [online]. Bratislava: Centrum vedecko-technických informácií SR, 300 p. [cited 2020-11-30]. ISBN 978-80-89965-63-2. Available from: https://registracia.itakademia.sk/media/themes/nip-pmz.pdf
WOLBER, David, 2014. App Inventor: Vytvořte si vlastní aplikaci pro Android. Brno: Computer Press. ISBN 978-80-251-4195-3.
LOVÁSZOVÁ, Gabriela, Jana GALBAVÁ, Viera PALMÁROVÁ and Monika TOMCSÁNYIOVÁ, 2010. Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Malé programovacie jazyky. Bratislava: Štátny pedagogický ústav. ISBN 978–80–8118–066–8.
CODE.ORG. Learn today, build a brighter tomorrow.
Code.org [online]. [cited 2021-7-13]. Available from: https://code.org/
THE LIFELONG KINDERGARTEN GROUP AT MIT MEDIA LAB. Scratch - Imagine, Program, Share [online]. [cited 2021-7-13]. Available from: https://scratch.mit.edu/
MASSACHUSETTS INSTITUTE OF TECHNOLOGY. MIT App Inventor
Explore MIT App Inventor [online]. [cited 2021-7-13]. Available from: http://appinventor.mit.edu/
MICRO:BIT EDUCATIONAL FOUNDATION. BBC micro:bit [online]. [cited 2021-7-13]. Available from: https://microbit.org/
SPY O.Z. Učíme s Hardvérom [online]. [cited 2021-7-13]. Available from: https://www.ucimeshardverom.sk/

Course language:
Slovak or English

Notes:
By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

Course assessment
Total number of assessed students: 17

A	B	C	D	E	FX
23.53	23.53	11.76	23.53	5.88	11.76

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 01.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PRS/15	**Course name:** Programming of robotic kits
Course type, scope and the method: **Course type:** Practice **Recommended course-load (hours):** **Per week:** 3 **Per study period:** 42 **Course method:** present	
Number of ECTS credits: 3	
Recommended semester/trimester of the course: 3.	
Course level: I.	
Prerequisities:	
Conditions for course completion: Assessment of individual work on computers for a number of sub-assignments - robotic mini-project. Creating and presenting a programmed robotic model including documentation.	
Learning outcomes: 1. To acquire an overview of robotic sets and robotic programming environments. 2. To acquire skills in constructing and programming robots in selected robotic programming environments.	
Brief outline of the course: Robotic set (Lego Mindstorms) - components, engines, sensors, basics of constructing of the mechanical parts of the model. Programming robotic models in languages NXT-G and NXC - branching statements, loops, blocks, events, parallel processes that work with sensors, datalogging, communication between several NXT bricks. Creating mini-project (eg, traffic lights, parking, dance creations, guitar, smart thermometer, measuring distance). Robotic competition, ideas for demanding projects. Creation and presentation of the final project - a programmed robot model (eg, navigate a maze, sports, paramedic) including documentation.	
Recommended literature: 1. BUMGARDNER, J. (2007) The Origins of Mindstorms. Wired, 2007. http://www.wired.com/geekdad/2007/03/the_origins_of_/ 2. Carnegie Mellon. Robotics Academy. http://www.education.rec.ri.cmu.edu/ 3. KABÁTOVÁ, M. a kol. (2010) Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Didaktika robotických stavebníc. Bratislava : ŠPÚ, 2010. ISBN 978-80-8118-070-5 4. JAKEŠ, T. (2014) LEGO MINDSTORMS NXT - Robotické vzdělávání, ZČU v Plzni, 2014. https://lego.zcu.cz/web/	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 49

A	B	C	D	E	FX
53.06	22.45	12.24	2.04	0.0	10.2

Provides: RNDr. Zuzana Bednárová, PhD.

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PSW1/06	**Course name:** Programming of web-pages

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

Number of ECTS credits: 2

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities: (ÚINF/DBS1a/15 and leboÚINF/DBS/15),ÚINF/PAZ1a/15

Conditions for course completion:
50% of the marks from continuous assignments

Learning outcomes:
An overview of modern technologies for creating dynamic websites. Describing and appliyng the basic principles of creating dynamic web pages. Utilize client-side (JavaScript) and server-side (PHP) web programming technologies. Using relational databases (MySQL) to create application web pages. Know the security risks of dynamic websites and be able to eliminate them.

Brief outline of the course:
1. JavaScript - introduction to JavaScript programming.
2. JavaScript - communication with the user, validation of data in forms using JavaScript.
3. JavaScript - introduction to using the jQuery library.
4. PHP - introduction to PHP programming.
5. PHP - data and control structures of the PHP language.
6. PHP - communication with the user, validation of data in forms using PHP.
7. PHP - object oriented problem solving in PHP language. File manipulation.
8. PHP - User authentication (cookies, session).
9. MySQL - introduction to working with MySQL database system.
10. MySQL - Simple applications using the database for data storage and access.
11. Web application security - an introduction to web application security.
12. Web application security - the most common web application security problems and how to eliminate them.

Recommended literature:
BLUM, Richard. PHP, MySQL& JavaScript: All-in-One. Hoboken, New Jersey: John Wiley, 2018. ISBN 978-1-119-46838-7.
KROMANN, Frank M. Beginning PHP and MySQL: From Novice to Professional. 5. CA, USA: Apress, 2018. ISBN 978-1-4302-6043-1.
HUSEBY, Sverre H. Zranitelný kód. Brno: Computer Press, 2006, 207 s. ISBN 80-251-1180-6.
SNYDER, Chris, Thomas MYER a Michael SOUTHWELL. Pro PHP Security: From Application Security Principles to the Implementation of XSS Defenses. 2. United States of America: Apress, 2010. ISBN 978-1-4302-3318-3.

Course language:
Slovak language, knowledge of English language is only necessary for reading documentation.

Notes:
Content prerequisite: WBdi/15 Web and user interface design

Course assessment
Total number of assessed students: 23

abs	n	neabs	z
65.22	34.78	0.0	0.0

Provides: PaedDr. Ján Guniš, PhD.

Date of last modification: 31.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ PAZ1a/15	**Course name:** Programming, algorithms, and complexity

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

Number of ECTS credits: 8

Recommended semester/trimester of the course: 1.

Course level: I., II.

Prerequisities:

Conditions for course completion:
Graded activities during semester: assignments, small exams, midterm, final project.
Final examination: practical finalterm focused on a complex task.
Rules to pass the subject: Pass the minimal limit of points for category of homeworks (assignments, final project) and tests (small exams, midterm). Get at least 42% from the finalterm and pass the defined limit of total points for all graded activities.

Learning outcomes:
Get an ability to implement basic Java programs and obtain essential knowledge related to object-oriented programming.

Brief outline of the course:
1. Introduction to Java and JPAZ2 framework, first Eclipse project, interactive communication with objects using turtle graphics, repeating code in loops, notion of class, object, and method.
2. For-loops, local variables, variable types, arithmetic expressions, random numbers, random walk, conditions.
3. While-loop, returning a value from a method, reference and reference variables, debugging.
4. Primitive and reference types, chars, String objects (including basic algorithms), mouse events, instance variables.
5. Array of primitive values and array of references, simple array algorithms.
6. Advanced array algorithms, two-dimensional array.
7. Exceptions and exception handling, files and directories, writing to text files.
8. Reading from text files.
9. Creating classes, encapsulation, getters and setters, constructors and their hierarchy, method overloading.
10. Inheritance and polymorphism.
11. Java Collections Framework, ArrayList class, wrapper classes for primitive types and autoboxing, interfaces List, Set, Map and their implementations, methods equals and hashCode.
12. Access modifiers, abstract classes and methods, creating and implementing interfaces, sorting, static methods and variables.
13. Creating and throwing exceptions, checked and runtime exceptions, JavaDoc, Maven.

Recommended literature:

1. ECKEL, Bruce. Thinking in Java. Fourth edition. Upper Saddle River, NJ: Prentice Hall, c[2006]. ISBN 978-01-318-7248-6.
2. PECINOVSKÝ, Rudolf. OOP: naučte se myslet a programovat objektově. Brno: Computer Press, 2010. ISBN 978-80-251-2126-9.
3. SIERRA, Kathy a Bert BATES. Head first Java. Vyd. 2. Sebastopol: O´Reilly, 2005. ISBN 978-05-960-0920-5.

Course language:
Slovak language, english language is required only to read Java API documentation.

Notes:

Course assessment
Total number of assessed students: 717

A	B	C	D	E	FX
16.18	7.39	11.44	15.48	15.06	34.45

Provides: RNDr. Juraj Šebej, PhD., RNDr. Zuzana Bednárová, PhD., RNDr. Miroslav Opiela, PhD., Mgr. Antónia Matisová, Mgr. Zoltán Szoplák

Date of last modification: 31.08.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PAZ1b/15	**Course name:** Programming, algorithms, and complexity

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

Number of ECTS credits: 7

Recommended semester/trimester of the course: 2.

Course level: I., II.

Prerequisities: ÚINF/PAZ1a/15

Conditions for course completion:
Graded activities during semester: assignments, small theoretical exams, practical and theoretical midterm.
Final examination: practical and theoretical finalterm.
Rules to pass the subject: Get at least 50% from theoretical activities (small exams, theoretical midterm and theoretical finalterm) and from practical activities (practical midterm and finalterm). Pass the defined limit of total points for all graded activities.

Learning outcomes:
To know essential algorithms, data structures, and methods used for efficient algorithms design. To understand time complexity analysis. To practice efficient implementation of algorithms. To recognize combinatorial and graph algorithms.

Brief outline of the course:
1. Recursion and fractals.
2. Binary search, basic sorting algorithms, time complexity analysis, O-notation.
3. Basic data structures and algorithms: linked list, stack, queue.
4. Trees and their applications.
5. Efficient sorting algorithms (QuickSort, MergeSort, HeapSort).
6. Backtracking.
7. Dynamic programming, divide and conquer strategy.
8. Unweighted graphs, graph traversal, graph topological sort.
9. Weighted graphs, the shortest path algorithms.
10. Minimum spanning tree, greedy algorithms.
11. Hashing, amortized time complexity, string-searching algorithms.

Recommended literature:
1. WRÓBLEWSKI, Piotr. Algoritmy: datové struktury a programovací techniky. Brno: Computer Press, 2004. ISBN 80-251-0343-9.
2. CORMEN, Thomas H. Introduction to algorithms. 3rd ed. Cambridge: MIT Press, c2009. ISBN 978-0-262-03384-8.
3. KLEINBERG, Jon a Éva TARDOS. Algorithm design. Thirteenth impression. Noida, India: Pearson, c2014. ISBN 9789332518643.

4. MAREŠ, Martin a Tomáš VALLA. Průvodce labyrintem algoritmů. Praha: CZ.NIC, z.s.p.o., 2017. CZ.NIC. ISBN 978-80-88168-19-5.

Course language:
Slovak language, literature is available in english and czech language.

Notes:

Course assessment
Total number of assessed students: 1222

A	B	C	D	E	FX
13.75	7.53	9.9	19.31	21.52	27.99

Provides: RNDr. Zuzana Bednárová, PhD., RNDr. Juraj Šebej, PhD., RNDr. Miroslav Opiela, PhD., Mgr. Antónia Matisová, Mgr. Gabriela Vozáriková

Date of last modification: 31.08.2021

Approved:

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 ECTS credits: 2

Recommended semester/trimester of the course: 1., 3., 5.

Course level: I., II.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 517

A	B	C	D	E	FX
22.82	16.05	21.66	18.57	17.99	2.9

Provides: PhDr. Anna Janovská, PhD., Mgr. Ondrej Kalina, PhD.

Date of last modification: 28.06.2021

Approved:

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 ECTS credits: 2

Recommended semester/trimester of the course: 3.

Course level: I.

Prerequisities:

Conditions for course completion:
The evaluation of the course and its subsequent completion will be based on clearly and objectively set requirements, which will be set in advance and will not change. The aim of the assessment is to ensure an objective and fair mapping of the student's knowledge while adhering to all ethical and moral standards. There is no tolerance for students' fraudulent behavior, whether in the teaching process or in the assessment process.
1. Active participation in seminars
2. Elaboration and presentation of PPT presentation on the assigned topic. Maximum number of points 20; minimum number of points 11.
3. Elaboration of an essay in the range of 4xA4 (standard pages). Maximum number of points 20; minimum number of points 11.
The final evaluation (grade) is the sum of points for the presentation and the essay.
A 40b - 37b
B 36b - 33b
C 32b - 29b
D 28b - 25b
E 24b - 21b
FX 20b - 0b

Learning outcomes:
The student is able to demonstrate an understanding of the individual's behavior in selected everyday situations such as conflict, group influence, empathy, helping, aggression, etc.
The student is able to describe, explain and evaluate the psychological mechanisms that occur in everyday situations.
The student is able to apply basic psychological knowledge to himself (self-regulation) but also in interaction with others (cooperation).
The method of teaching the subject will be oriented to the student. Speakers will be interested in the needs, expectations and opinions of students so as to encourage them to think critically by expressing respect and feedback on their opinions and needs.
The content of the curriculum will be based on primary and high-quality sources that will reflect the topicality of the topics so as to ensure the connection of the curriculum with other subjects and also

the connection of the curriculum with practice. Students will be expected to take an active approach in lectures and seminars with an emphasis on their independence and responsibility.

Brief outline of the course:
How to understand human behavior (overview of basic approaches in psychology); Basic overview of cognitive processes; Learning processes and their use in practice; Social influences, prosocial and antisocial behavior; How human emotions and motivations work; Deciding - why and when we take risks; Childhood experiences and their relationship to adulthood; Abnormal behavior, mental disorders and therapeutic approaches

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 164

A	B	C	D	E	FX
51.22	14.02	25.61	6.71	1.83	0.61

Provides: Mgr. Ondrej Kalina, PhD.

Date of last modification: 24.06.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/KMG/17	**Course name:** Quantitative Methods in Geography

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 ECTS credits: 3

Recommended semester/trimester of the course: 2.

Course level: I.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 190

A	B	C	D	E	FX
25.79	18.42	20.53	18.42	16.84	0.0

Provides: RNDr. Janetta Nestorová-Dická, PhD., prof. Mgr. Jaroslav Hofierka, PhD., Mgr. Patrícia Gurová

Date of last modification: 29.03.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/RPBI/20	**Course name:** Resolving computer security incidents

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

Number of ECTS credits: 3

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: 6

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

Provides: RNDr. JUDr. Pavol Sokol, PhD.

Date of last modification: 08.02.2021

Approved:

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 ECTS 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: 234

A	B	C	D	E	FX
44.44	26.92	17.09	7.69	2.99	0.85

Provides: doc. PaedDr. Renáta Orosová, PhD., PaedDr. Janka Ferencová, PhD.

Date of last modification: 08.06.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚTVŠ/ ÚTVŠ/CM/13	**Course name:** Seaside Aerobic Exercise

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: Per study period: 36s
Course method: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course:

Course level: I., II.

Prerequisities:

Conditions for course completion:
Conditions for course completion:
Attendance

Learning outcomes:
Learning outcomes:
Students will be provided an overview of possibilities how to spend leisure time in seaside conditions actively and their skills in work and communication with clients will be improved. Students will acquire practical experience in organising the cultural and art-oriented events, with the aim to improve the stay and to create positive experiences for visitors.

Brief outline of the course:
Brief outline of the course:
1. Basics of seaside aerobics
2. Morning exercises
3. Pilates and its application in seaside conditions
4. Exercises for the spine
5. Yoga basics
6. Sport as a part of leisure time
7. Application of projects of productive spending of leisure time for different age and social groups (children, young people, elderly)
8. Application of seaside cultural and art-oriented activities in leisure time

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 41

abs	n
12.2	87.8

Provides: Mgr. Agata Horbacz, PhD.
Date of last modification: 15.03.2019
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KF/ 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 ECTS credits: 2	
Recommended semester/trimester of the course: 3., 5.	
Course level: I.	
Prerequisities: KF/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:	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ SBP1/13	**Course name:** Seminar for Bachelor Thesis 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 ECTS 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:
ÚTVAR REKTORA UPJŠ 2019: Základné usmernenia a dokumenty k záverečným prácam na UPJŠ v Košiciach. Dostupné na: <https://www.upjs.sk/pracoviska/univerzitna-kniznica/zaverecne-prace/>.
ÚSTAV GEOGRAFIE PF UPJŠ 2019: Pokyny na tvorbu záverečných prác na Ústave gego-rafie Prírodovedeckej fakulty UPJŠ v Košiciach. Dostupné na: <https://geografia.science.upjs.sk/images/studium/Pokyny_ZP_UGE_2019.pdf>.
HOVORKA, D., KOMÁREK, K., CHRAPAN, J. 2011: Ako písať a komunikovať. Martin (Vydavateľstvo Osveta).
KATUŠČÁK, D. 2008: Ako písať záverečné a kvalifikačné práce. Nitra (Enigma).

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 411

A	B	C	D	E	FX
94.4	4.14	0.73	0.0	0.73	0.0

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

Date of last modification: 22.09.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ SBP2/13	**Course name:** Seminar for Bachelor Thesis 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 ECTS 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: 367

A	B	C	D	E	FX
68.66	22.07	7.9	0.54	0.27	0.54

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

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

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 ECTS 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: 57

A	B	C	D	E	FX
31.58	36.84	19.3	10.53	1.75	0.0

Provides: Mgr. Ján Ruman, PhD.

Date of last modification: 13.05.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/SWI1a/15	**Course name:** Software engineering

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 ECTS credits: 2

Recommended semester/trimester of the course: 4.

Course level: I.

Prerequisities: ÚINF/DBS1a/15 and leboÚINF/DBdi/15

Conditions for course completion:

Learning outcomes:
To provide information concerning the principal activities related to the development of software products.

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

Recommended literature:
1. BERKUN, S. The Art Of Project Management. O Reilly, 2005.
2. BJORNER, D. Software engineering 1,2,3. Springer-Verlag Berlin, 2006.
3. SOMMERVILLE, I. Software Engineering. Addison-Wesley, 2007.

Course language:

Notes:

Course assessment
Total number of assessed students: 313

A	B	C	D	E	FX
18.21	23.0	20.13	17.57	19.81	1.28

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

Date of last modification: 03.05.2015

Approved:

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 ECTS 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: 144

A	B	C	D	E	FX
23.61	22.92	24.31	20.83	7.64	0.69

Provides: Mgr. Blanka Jenčíková

Date of last modification: 03.05.2015

Approved:

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: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course: 1.

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

Prerequisities:

Conditions for course completion:
Min. 80% of active participation in classes.

Learning outcomes:
Sports activities in all their forms prepare university students for their professional and personal life. They have a great impact on physical fitness and performance. Specialization in sports activities enables students to strengthen their relationship towards the selected sport in which they also improve.

Brief outline of the course:
Brief outline of the course:
Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, aikido, basketball, badminton, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, indoor football, S-M systems, step aerobics, table tennis, tennis, volleyball and chess.
In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness.
In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 12859

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
87.01	0.08	0.0	0.0	0.0	0.04	8.1	4.77

Provides: Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Bc. Richard Melichar, Mgr. Petra Tomková, PhD.

Date of last modification: 13.05.2021

Approved:

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: combined, present

Number of ECTS credits: 2

Recommended semester/trimester of the course: 2.

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

Prerequisities:

Conditions for course completion:
active participation in classes - min. 80%.

Learning outcomes:
Sports activities in all their forms prepare university students for their professional and personal life. They have a great impact on physical fitness and performance. Specialization in sports activities enables students to strengthen their relationship towards the selected sport in which they also improve.

Brief outline of the course:
Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, aikido, basketball, badminton, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, indoor football, S-M systems, step aerobics, table tennis, tennis, volleyball and chess.
In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness.
In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 11675

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
84.52	0.56	0.02	0.0	0.0	0.05	10.63	4.22

Provides: Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Bc. Richard Melichar, Mgr. Petra Tomková, PhD.
Date of last modification: 13.05.2021
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of ECTS credits: 2

Recommended semester/trimester of the course: 3.

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

Prerequisities:

Conditions for course completion:
min. 80% of active participation in classes

Learning outcomes:
Sports activities in all their forms prepare university students for their professional and personal life. They have a great impact on physical fitness and performance. Specialization in sports activities enables students to strengthen their relationship towards the selected sport in which they also improve.

Brief outline of the course:
Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, aikido, basketball, badminton, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, indoor football, S-M systems, step aerobics, table tennis, tennis, volleyball and chess.
In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness.
In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 7873

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
88.8	0.05	0.01	0.0	0.0	0.03	4.08	7.04

Provides: Mgr. Marcel Čurgali, Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Bc. Richard Melichar, Mgr. Petra Tomková, PhD.
Date of last modification: 13.05.2021
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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

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

Number of ECTS credits: 2

Recommended semester/trimester of the course: 4.

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

Prerequisities:

Conditions for course completion:
min. 80% of active participation in classes

Learning outcomes:
Sports activities in all their forms prepare university students for their professional and personal life. They have a great impact on physical fitness and performance. Specialization in sports activities enables students to strengthen their relationship towards the selected sport in which they also improve.

Brief outline of the course:
Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, aikido, basketball, badminton, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, indoor football, S-M systems, step aerobics, table tennis, tennis, volleyball and chess.
In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness.
In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 5125

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
83.14	0.31	0.04	0.0	0.0	0.0	7.75	8.76

Provides: Mgr. Marcel Čurgali, Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Bc. Richard Melichar, Mgr. Petra Tomková, PhD.
Date of last modification: 13.05.2021
Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ SXM1/15	**Course name:** Structure formats and representation of data

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 ECTS credits: 2

Recommended semester/trimester of the course: 5.

Course level: I.

Prerequisities:

Conditions for course completion:
Evaluation of partial assignments within larger project.
Evaluation of multiple assignments corresponding to learning blocks.

Learning outcomes:
Become acknowledged with theoretical concepts and methodologies with structured and semistructured data. Acquire programming skills with implementations of these concepts.

Brief outline of the course:
Representation of semi-structured data in XML, valid and well-formed XML document. XML parsers: DOM, SAX, StAX. Java API of XML parsers. Schemas for XML documents: DTD, XML Schema. Addressing in XML: XPath. Transformations of XML documents: XSLT. Other formats for semistructured data: JSON, YAML. API for data binding in Java: Jackson (JSON), SnakeYAML (YAML), JAXB (XML).

Recommended literature:
1. Eliotte "Rusty" Harold. XML Bible, Gold Edition. Wiley, 2001. ISBN 978-0764548192.
2. Grigoris Antoniou, Frank Van Harmelen. A Semantic Web Primer, Second Edition. MIT Press, 2008. ISBN 978-0262012423.
3. Michaek Kay. XSLT 2.0 Programmer's Reference, 3rd Edition. Wrox, 2004. ISBN: 978-076456909.

Course language:

Notes:

Course assessment
Total number of assessed students: 73

A	B	C	D	E	FX
32.88	21.92	20.55	13.7	10.96	0.0

Provides: Mgr. Alexander Szabari, PhD.

Date of last modification: 01.06.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/SVG/04	**Course name:** Student Scientific Conference in Geography

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

Number of ECTS 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: 174

A	B	C	D	E	FX
99.43	0.0	0.0	0.0	0.0	0.57

Provides: prof. RNDr. Peter Spišiak, CSc., RNDr. Dušan Barabas, CSc., RNDr. Alena Gessert, PhD., RNDr. Janetta Nestorová-Dická, PhD., Mgr. Marián Kulla, PhD., doc. Ing. Katarína Bónová, PhD., RNDr. Stela Csachová, PhD.

Date of last modification: 31.03.2020

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ DGS/15	**Course name:** Students` Digital Literacy

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 ECTS credits: 2

Recommended semester/trimester of the course: 1.

Course level: I.

Prerequisities:

Conditions for course completion:
continuous assessment and final project

Learning outcomes:
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.

Brief outline of the course:
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.

Recommended literature:
1. Bruff, D. (2009). Teaching with classroom response systems: Creating active learning environments. San Francisco: Jossey-Bass.
2. Byrne, R. (2012). Google Drive and Docs for Teachers. Free Tech for Teachers.
3. Kawasaki, G. (2012). What the Plus! Google+ for the Rest of Us. Amazon igital Services.
4. Kolb, L. (2011). Cell Phones in the Classroom: A Practical Guide for Educators. International Society for Technology in Education.

Course language:
Slovak

Notes:

Course assessment
Total number of assessed students: 250

abs	n
96.0	4.0

Provides: doc. RNDr. Stanislav Lukáč, PhD., doc. RNDr. Jozef Hanč, PhD., doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ LKSp/13	**Course name:** Summer Course-Rafting of TISA River
Course type, scope and the method: **Course type:** Practice **Recommended course-load (hours):** **Per week: Per study period:** 36s **Course method:** present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisities:	
Conditions for course completion: Conditions for course completion: Attendance Final assessment: Raft control on the waterway (attended/not attended)	
Learning outcomes: Learning outcomes: Students have knowledge of rafts (canoe) and their control on waterway.	
Brief outline of the course: Brief outline of the course: 1. Assessment of difficulty of waterways 2. Safety rules for rafting 3. Setting up a crew 4. Practical skills training using an empty canoe 5. Canoe lifting and carrying 6. Putting the canoe in the water without a shore contact 7. Getting in the canoe 8. Exiting the canoe 9. Taking the canoe out of the water 10. Steering a) The pry stroke (on fast waterways) b) The draw stroke 11. Capsizing 12. Commands	
Recommended literature:	
Course language:	
Notes:	

Course assessment Total number of assessed students: 153	
abs	n
45.75	54.25
Provides: Mgr. Dávid Kaško, PhD.	
Date of last modification: 18.03.2019	
Approved:	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ KP/12	**Course name:** Survival Course
Course type, scope and the method: **Course type:** Practice **Recommended course-load (hours):** **Per week: Per study period:** 36s **Course method:** combined, present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisities:	
Conditions for course completion: Conditions for course completion: Attendance Final assessment: continuous fulfilment of all tasks within the course	
Learning outcomes: Learning outcomes: Students will be familiarized with principles of safe stay and movement in extreme natural conditions as they will obtain theoretical knowledge and practical skills to solve the extraordinary and demanding situations connected with survival and minimization of damage to health. The course develops team work and students will learn how to manage and face the situations that require overcoming of obstacles.	
Brief outline of the course: Brief outline of the course: Lectures: 1. Principles of behaviour and safety for movement and stay in unknown mountains 2. Preparation and leadership of tour 3. Objective and subjective danger in mountains 4. Principles of hygiene and prevention of damage to health in extreme conditions Exercises: 1. Movement in terrain, orientation and navigation in terrain (compasses, GPS) 2. Preparation of improvised overnight stay 3. Water treatment and food preparation.	
Recommended literature:	
Course language:	
Notes:	

Course assessment Total number of assessed students: 393	
abs	n
44.53	55.47
Provides: MUDr. Peter Dombrovský, Mgr. Ladislav Kručanica, PhD.	
Date of last modification: 15.03.2019	
Approved:	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚINF/ SLO1a/15	**Course name:** Symbolic logic

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

Number of ECTS credits: 5

Recommended semester/trimester of the course: 6.

Course level: I., II.

Prerequisities:

Conditions for course completion:

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

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

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

Course language:

Notes:

Course assessment
Total number of assessed students: 405

A	B	C	D	E	FX
25.43	10.12	12.59	11.36	27.16	13.33

Provides: prof. RNDr. Stanislav Krajči, PhD., doc. RNDr. Ondrej Krídlo, PhD.

Date of last modification: 03.05.2015

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

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 ECTS 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: 501

A	B	C	D	E	FX
36.93	32.93	20.36	5.99	1.6	2.2

Provides: Mgr. Katarína Petríková, PhD.

Date of last modification: 08.06.2021

Approved:

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ TYS1/15	**Course name:** Typographical systems

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

Number of ECTS credits: 2

Recommended semester/trimester of the course: 6.

Course level: I.

Prerequisities:

Conditions for course completion:

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

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

Recommended literature:
1. D. E. Knuth, The TeXbook, Computers and Typesetting, Addison-Wesley, Reading, Massachusetts, 1986.
2. M. Doob, Jemný úvod do TeXu, CSTUG, 1990; èeský preklad z "A Gentle Introduction to TeX" (text vo¾ne prístupný v CTAN archíve).
3. O. Ulrych, AMS-TeX za 59 minút, (verzia 1.0), Praha, 1989.
4. J. Chlebíková, AMS-TeX (verzia 2.0), Bratislava, 1992.
5. M. Spivak, The Joy of TeX, Amer. Math. Soc., 1986.
6. L. Lamport, LaTeX: A Document Preparation System, Addison-Wesley, Massachusetts, 1986.
7. L. Lamport, MakeIndex: An index processor for LaTeX, 17 February 1987.
8. J. Rybièka, LaTeX pro začátečníky, Konvoj, Brno, 1995.
9. H. Partl, E. Schlegl, I. Hyna, P. Sýkora, LaTeX – Stručný popis.
10. T. Oetiker, H. Partl, I. Hyna, E. Schlegl, M. Kocer, P. Sýkora, Ne příliš stručný úvod do systému LaTeX2e (neboli LaTeX2e v 73 minutách).
11. M. Goossens, F. Mittelbach, and A. Samarin, The LaTeX Companion, Addison-Wesley, Reading, Massachusetts, 1994. Kapitola 8 je volne prístupná v TeX archívoch (ch8.pdf). 4
12. G. Grätzer, Math into LaTeX, 3rd edition, Birkhäuser, Boston, 2000.

Course language:
Slovak or english

Notes:

Course assessment
Total number of assessed students: 251

A	B	C	D	E	FX
48.21	17.93	19.92	6.37	6.77	0.8

Provides: prof. RNDr. Stanislav Krajči, PhD.

Date of last modification: 10.02.2021

Approved: