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University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Algorithms and data structures

ASU1/15

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., N

**Prerequisities:** ÚINF/PAZ1a/15 and ÚINF/PAZ1b/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 assessm	Course assessment							
Total number of assessed students: 221								
Α	В	С	D	Е	FX			
12.22	5.43	18.55	28.05	32.58	3.17			

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

 $\textbf{Date of last modification:}\ 08.01.2022$ 

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ Course name: Alternative Education ALP/06 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: 399 C Α В D Е FX 64.16 25.06 6.52 2.01 0.25 2.01

Provides: Mgr. Zuzana Vagaská, PhD.

Date of last modification: 12.03.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Anthropology of Art I KSSFaK/ ANTUM1/15 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: Course language: Notes: Course assessment** Total number of assessed students: 609 В C E FX A D 14.94 16.09 25.94 20.85 15.11 7.06 Provides: PhDr. Lukáš Šutor, PhD.

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

Date of last modification: 16.11.2024

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: Course name: Anthropology of Art II

KSSFaK/ ANTUM2/15

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: KSSFaK/ANTUM1/15

**Conditions for course completion:** 

**Learning outcomes:** 

**Brief outline of the course:** 

**Recommended literature:** 

**Course language:** 

**Notes:** 

Course assessment

Total number of assessed students: 512

A	В	С	D	Е	FX
17.58	15.82	30.66	18.55	13.48	3.91

**Provides:** PhDr. Lukáš Šutor, PhD.

Date of last modification: 16.11.2024

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Automata and formal languages

AFJ1a/15

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., N

**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:

Slovak or English

### **Notes:**

#### Course assessment

Total number of assessed students: 939

A	В	С	D	Е	FX
26.94	18.53	23.86	16.29	9.58	4.79

**Provides:** prof. RNDr. Viliam Geffert, DrSc., RNDr. Juraj Šebej, PhD.

Date of last modification: 23.11.2021

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Automata and formal languages

AFJ1b/15

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: 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:**

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

## Course language:

Slovak or English

### **Notes:**

Content prerequisities:

- 1. Basic mathematical background (proof by contradicion and by mathematical induction), basic notions from the set theory (union, intersection, complement, cartesian product).
- 2. Basic knowledge about finite state automata and regular languages.

### **Course assessment**

Total number of assessed students: 616

A	В	С	D	Е	FX
38.15	17.05	19.81	16.56	6.01	2.44

Provides: prof. RNDr. Viliam Geffert, DrSc., RNDr. Juraj Šebej, PhD.

Date of last modification: 23.11.2021

University: P. J. Šafárik University in Košice						
Faculty: Faculty of A	Faculty: Faculty of Arts					
Course ID: ÚINF/ BKP/14	Course name: Bachelo	or Project				
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:					
Number of ECTS cr	edits: 2					
Recommended seme	ster/trimester of the co	ourse: 5.				
Course level: I.	,					
Prerequisities:						
Conditions for cours	se completion:					
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	iture:					
Course language:						
Notes:						
Course assessment Total number of asse	ssed students: 7					
abs n						
100.0 0.0						
Provides:	Provides:					
Date of last modifica	Date of last modification:					
Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.						

	COURSE INFORMATION LETTER
University: P. J. Šafá	rik University in Košice
Faculty: Faculty of A	rts
Course ID: ÚINF/ BPO/14	Course name: Bachelor Thesis and its Defence
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:
Number of ECTS cr	edits: 4
Recommended seme	ster/trimester of the course:
Course level: I.	
Prerequisities:	
fraud and must meet 21/2021, which lays Košice and its compound in the process of <b>Learning outcomes:</b> The bachelor's thesis	s the result of the student's own work. It must not show elements of academic the criteria of good research practice defined in the Rector's Decision no. down the rules for assessing plagiarism at Pavol Jozef Šafárik University in ments. Fulfillment of the criteria is verified mainly in the supervision process thesis defense. Failure to do so is reason for disciplinary action.  demonstrates mastery of the basics of theory and professional terminology acquisition of knowledge, skills and competencies in accordance with the
declared profile of the in solving selected fi student demonstrates ethical. Further detail	e graduate of the study program, as well as the ability to apply them creatively field problems. The bachelor thesis may have elements of compilation. The the ability of independent professional work in terms of content, formal and is on the bachelor thesis are determined by Directive no. 1/2011 on the basic theses and the Study Regulations of UPJŠ in Košice for the 1st, 2nd and
2, Presentation of the	bachelor thesis in accordance with the instructions of the supervisor. results of the bachelor's thesis before the examination commission. ns related to the topic of the bachelor thesis within the discussion.
Recommended literal The recommended literal bachelor's thesis.	erature is determined individually in accordance with the topic of the
Course language: Slovak and optionally	y English.

**Notes:** 

Course assessment Total number of assessed students: 153								
A B C D E FX								
44.44	26.8	14.38	7.84	6.54	0.0			
<b>Provides:</b>	Provides:							
Date of last mo	dification: 28 11	2021						

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Bachelor's Thesis Defense KSSFaK/OZPb/15 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: 91 C Α В D Е FX 52.75 19.78 14.29 8.79 1.1 3.3 **Provides:** Date of last modification: 11.08.2022 Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

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University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: ÚBEV/ | Course name: Biology of Children and Adolescents

BDD/05

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:**

Acquisition of basic morphological and physiological knowledge about individual organs and systems of the human body with a focus on the specifics of childhood and adolescence. Familiarity with developmental and growth characteristics and with the most common diseases in these stages of ontogenesis.

### **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: 1826

Α	В	С	D	Е	FX
31.11	24.15	18.62	16.48	9.04	0.6

Provides: doc. RNDr. Monika Kassayová, CSc.

Date of last modification: 20.04.2022

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

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University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Chapters from the Slovak Interwar Literature KSSFaK/KML/07 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:** 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: 105 C Α В D Е FX 39.05 18.1 16.19 15.24 7.62 3.81

Provides: doc. PaedDr. Ivica Hajdučeková, PhD.

Date of last modification: 15.09.2023

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Chapters from the Theory of Literature KSSFaK/KTL/07 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:** 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: 323 C Α В D Е FX 29.1 20.12 11.46 18.27 13.31 7.74

Provides: doc. Marián Milčák, PhD.

Date of last modification: 13.09.2023

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** Course name: Communication

KPPaPZ/KOM/25

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: 4** 

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

Course level: I., P

### **Prerequisities:**

### **Conditions for course completion:**

- 1. Active participation in teaching (absence allowed max. 90 min.),
- 2. Implementation of assignments and presentation of assignments focused on the application of knowledge, skills and competence in the field of communication with a particular focus on teacher communication in the school environment.

Detailed information in the electronic bulletin board of the subject in AIS2.

### **Learning outcomes:**

The student will acquire knowledge and information about the basics of verbal and non-verbal communication, communication errors, assertive and non-violent communication. The content of the subject will be enriched with knowledge, skills and competencies necessary for the work of a teacher.

The student is able to apply the acquired communication skills in practice, is able to apply effective principles and principles of communication with others, is able to anticipate and thus prevent possible misunderstandings, which will contribute to the development of his social and professional skills.

The student will acquire the competencies to communicate effectively in work and personal life, especially in the school environment.

#### **Brief outline of the course:**

Basics of communication (Transmitter-receiver principle, "What is said is not equal to what is heard", "Internal dialogue", The concept of communication)

Active listening (The most important criteria for active listening)

Misunderstandings (How Misunderstandings Arise, How to Avoid Misunderstandings)

Body language (What is body language, Active / passive body language, Dress psychology)

Signs of Physical Expression, Disadvantages of Fake Physical Expression, Difference Between Active and Passive Body Expression

Personality development (Voices in us, "child in me" - identification of one's own personality)
Basics of assertive and non-violent communication. Specifics of communication in the school environment.

### **Recommended literature:**

ROSENBERG, M. B. 2023. Nenásilná komunikácia. Aktuell. 234 s.

VÝROST, Jozef - SLAMĚNÍK, Ivan. Sociální psychologie. 2., přepr. a rozš. vyd. Praha: GRADA, 2008. 408 s.

VÝROST, Jozef - SLAMĚNÍK, Ivan. Aplikovaná sociální psychologie I: Člověk a sociální instituce. 1. vyd. Praha: Portál, 1998. 384 s. ISBN 80-7178-269-6.

KOMÁRKOVÁ, Růžena - SLAMĚNÍK, Ivan - VÝROST, Jozef. Aplikovaná sociální psychologie III: Sociálněpsychologický výcvik. 1. vyd. Praha: Grada Publishing, 2001. 224 s. VÝROST, Jozef - SLAMĚNÍK, Ivan. Aplikovaná sociální psychologie II. 1. vyd. Praha: Grada Publishing, 2001. 260 s.

# **Course language:**

slovak

### Notes:

### **Course assessment**

Total number of assessed students: 0

A	В	С	D	Е	FX
0.0	0.0	0.0	0.0	0.0	0.0

Provides: PhDr. Anna Janovská, PhD., PhDr. Mojmír Trebuňák

Date of last modification: 04.02.2025

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Comparative Grammar of West Slavic Languages KSSFaK/PGZJ/22 Course type, scope and the method: Course type: Seminar 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:** 

**Course language:** 

**Recommended literature:** 

**Notes:** 

Course assessment

Total number of assessed students: 227

A	В	С	D	Е	FX
39.65	21.59	18.06	13.66	4.85	2.2

Provides: doc. PhDr. Marianna Sedláková, PhD.

Date of last modification: 12.08.2022

University: P. J. Šafárik University in Košice

**Faculty:** Faculty of Arts

Course ID: ÚINF/ | Course name: Computability theory

**TVY/15** 

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., N

**Prerequisities:** 

### **Conditions for course completion:**

Two written examinations focused on the construction of Turing machines, creating sequences of (primitive) recursive functions, solving examples. Oral exam focused on the relationship between classes of recursive and computable functions, the problem of stopping a Turing machine.

### **Learning outcomes:**

Knowledge of computational model of Turing machine, Goedelian arithmetization, and relationship between Turing computability and recursivity of functions.

### **Brief outline of the course:**

- 1. Turing machine, basic principles of work of Turing machine, formalization of basic notions
- 2. Shifting of states, compositions of machines, computations on composed machines
- 3. Modifications of configuration
- 4. Elementary Turing machines
- 5. Compositions of elementary Turing machines
- 6. Primitively recursive functions
- 7. Primitively recursive predicates
- 8. Functions and predicates from number theory
- 9. Goedelian arithmetizationa of Turing computability
- 10. Recursive functions
- 11. Relationship of recursivity and Turing computability
- 12. Halting problem

#### **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:

Slovak	Slovak						
Notes:	Notes:						
	Course assessment Total number of assessed students: 331						
A	A B C D E FX						
53.17	11.18	11.18	4.83	5.14	14.5		

Provides: doc. RNDr. L'ubomír Antoni, PhD.

Date of last modification: 04.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Computer network Internet

PSIN/15

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., N

Prerequisities: ÚINF/PAZ1a/15 or ÚINF/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:**

Students will get the informations about principles and achitecture of Internet. They will understand the principles of ISO/OSI layers reference model for network communication. They will understand the meaning and usage of terms protocol, service, interface. They will analyze the parameters of communication channels, understand the function of interconnection devices (hub, switch, router). They will understand the structure of IP packets, addressing and how packets are transmitted, the principle of routing protocols and the creation of routing tables. They will understand the priciples of acknowledged TCP transport transmission and its implementation. They will know how to use the interface of UDP and TCP protocols in a program code. They will understand the basic application protocols of the Internet.

#### **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 protocols 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:

Slovak or English

#### **Notes:**

Content prerequisities: basic programming skills in Java

### Course assessment

Total number of assessed students: 323

A	В	С	D	Е	FX
10.53	8.36	19.2	19.81	29.41	12.69

Provides: RNDr. Peter Gurský, PhD., RNDr. Richard Staňa

Date of last modification: 04.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** Course name: Conflict Management

KPPaPZ/ MANAG/25

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: 4** 

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

Course level: I., P

### **Prerequisities:**

### **Conditions for course completion:**

The conditions for passing the course are as follows:

- 1. Active participation in exercises. Max. the missed range is 90 min.
- 2. Submission of the reflection on the selected topic within the specified time. Reflection topic: My strengths and weaknesses in conflict management. In a short presentation of their reflection, in the form of deconstruction, students will describe their strengths and weaknesses in the management of conflict situations with a focus on the application of knowledge, skills and competences needed in conflict situations in the work environment and the school environment.

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.

### **Learning outcomes:**

Successful mastery and demonstration of knowledge in the field of conflict management and control of basic rules.

The method of teaching the subject will be oriented to the student. Lecturers will be interested in students' needs, expectations and opinions 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.

The student is able to demonstrate an understanding of an individual's behavior in various conflict situations. The student is able to describe, explain and evaluate their own internal resources, competencies as well as limitations and weaknesses that are directly related to conflict management. The student is able to apply theoretical knowledge and principles of conflict resolution to everyday situations.

After completing the course, students will be able to: a) express and summarize basic knowledge related to conflict management; b) understand the basic rules and dynamics of the origin, course

and termination of the conflict; c) apply knowledge in practice, e.g. in the school environment; d) apply key competencies that increase the possibilities of their application in all areas of practice with a special focus on the work of a teacher. They will acquire knowledge from the theory of conflict management as well as capabilities and competences for solving them, e.g. in the context of school teams.

#### **Brief outline of the course:**

Disputes and their causes (Types of disputes, External influences, Be able to reveal the causes of disputes), Dispute origin (Levels of disputes, Escalation warning signals, Escalation removal strategies, Know how to explain escalation stages; How do I approach a dispute?) Dispute Resolution, Dispute Resolution Strategies, Dispute Discussion, Dispute Settlement Initiatives, Knowing how to handle a dispute and how to effectively resolve it), Dispute Resolution (Options, Public Struggle, Covert Struggle, Indefinite Postponement, Agreement, "Fair play", compromise, cooperation, capitulation, escape or separation), Prevention (Structures that produce disputes, The meaning and purpose of disputes, Stages and steps of dispute resolution, What does a positive corporate culture mean? Dispute is an incentive for change)

#### **Recommended literature:**

**Course language:** 

**Notes:** 

#### **Course assessment**

Total number of assessed students: 0

A	В	С	D	Е	FX
0.0	0.0	0.0	0.0	0.0	0.0

Provides: Mgr. Ondrej Kalina, PhD., Mgr. Veronika Borgoňová, PhD.

Date of last modification: 04.02.2025

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Contemporary Slovak Language - Lexicology KSSFaK/SLEX/15 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:** 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: 374

Α	В	С	D	Е	FX
6.95	9.36	17.65	17.91	28.34	19.79

Provides: PhDr. Iveta Bónová, PhD., univerzitná docentka

Date of last modification: 04.02.2025

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Contemporary Slovak Language - Morphology KSSFaK/MORF/15 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: Learning outcomes: Brief outline of the course: Recommended literature:** 

**Notes:** 

Course assessment

Course language:

Total number of assessed students: 328

A	В	С	D	Е	FX
5.79	19.51	19.21	20.43	16.46	18.6

Provides: doc. PhDr. Marianna Sedláková, PhD.

Date of last modification: 11.08.2022

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

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University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: Course name: Contemporary Slovak Language - Stylistics

KSSFaK/STYL/15

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:** 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: 231

A	В	С	D	Е	FX
14.72	23.38	30.3	19.05	11.69	0.87

Provides: doc. PhDr. Marianna Sedláková, PhD.

Date of last modification: 11.08.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Contemporary Slovak Language – Syntax KSSFaK/SYNT/15 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: 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: 292

A	В	С	D	Е	FX
10.96	9.93	14.38	18.84	21.23	24.66

Provides: doc. PhDr. Marianna Sedláková, PhD.

Date of last modification: 11.08.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

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

KRS/15

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., N

**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 Practic. 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: 136							
Α	В	С	D	Е	FX		
14.71	8.82	13.97	16.18	31.62	14.71		

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

**Date of last modification:** 08.01.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Culture of Spoken Discourse KSSFaK/KHP/11 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., 3. Course level: I. **Prerequisities: Conditions for course completion: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 72 C Α В D Е FX 41.67 33.33 13.89 2.78 0.0 8.33

**Provides:** Mgr. Lena Ivančová, PhD.

Date of last modification: 11.08.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Database systems

DBS1a/15

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:**

Demonstration of adequate mastery of the content standard of the subject in the ongoing and final evaluation, the ability to formulate a problem in the acquired terminology and solve it within a project.

Written works during the semester, project.

Written and oral exam.

#### **Learning outcomes:**

After completing the course, the student acquires the principles of relational databases, is able to apply standard data models, design relational databases and formulate filtering queries.

### **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:**

Slovak or English

**Notes:** 

# **Course assessment**

Total number of assessed students: 983

A	В	С	D	Е	FX
11.5	10.78	19.33	21.87	30.11	6.41

Provides: doc. RNDr. Csaba Török, CSc., RNDr. Lukáš Miňo, PhD.

Date of last modification: 08.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Database systems

DBS1b/15

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: L

Prerequisities: ÚINF/DBS1a/15

#### **Conditions for course completion:**

Demonstration of adequate mastery of the content standard of the subject in the ongoing and final evaluation, the ability to formulate a problem in the acquired terminology and solve it within a project.

Written works during the semester, project.

Written and oral exam.

#### **Learning outcomes:**

After completing the course, the student will be able to apply more sophisticated techniques of relational databases, theoretical analysis of functional dependencies of attributes and is able to work with non-relational databases.

#### **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:

Slovak or English

# **Notes:**

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

### **Course assessment**

Total number of assessed students: 794

A	В	С	D	Е	FX
9.57	8.82	14.11	24.31	33.5	9.7

Provides: doc. RNDr. Csaba Török, CSc., RNDr. Dávid Varga, RNDr. Lukáš Miňo, PhD.

Date of last modification: 08.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: Course name: Development of the Slovak Drama

KSSFaK/VSLD/07

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: 3.

Course level: I.

**Prerequisities:** 

**Conditions for course completion:** 

**Learning outcomes:** 

**Brief outline of the course:** 

**Recommended literature:** 

Course language:

**Notes:** 

Course assessment

Total number of assessed students: 410

A	В	С	D	Е	FX
24.88	29.76	20.73	13.41	6.34	4.88

Provides: PhDr. Lukáš Šutor, PhD.

Date of last modification: 16.11.2024

slovak

**Notes:** 

	Course assessm	Course assessment							
Total number of assessed students: 663									
A B			С	D	Е	FX			
	79.34	14.93	3.92	1.36	0.15	0.3			

**Provides:** prof. PhDr. Oľga Orosová, CSc., Mgr. Janka Liptáková, PhDr. Anna Janovská, PhD., Mgr. Zuzana Michalove

**Date of last modification:** 24.06.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Educational software

**EDS/15** 

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.
- 2. Creation of a multimedia educational game.
- 3. Creation of an interactive educational guiz.
- 4. Creation of an instructional educational video.

Conditions for the final evaluation:

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 of materials for teaching aid .
- 3. Creation and use of electronic and interactive educational documents (worksheets, presentations, textbooks and workbooks).
- 4. Creation of instructional educational video.
- 5. Electronic voting and questionnaire creation.
- 6. Creation of didactic tests and educational games. Gamification elements, tools and environments.
- 7. Collaborative web applications.
- 8. Online communication tools.
- 9. Complex online learning environments.

- 10. Online educational platforms, repositories, projects and competitions.
- 11. Simulations and modelling. Subject-focused educational programmes.
- 12. Use digital tools to plan, monitor, differentiate and personalise learning. Accessibility of digital tools and learning resources.

#### **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: 106

A	В	С	D	Е	FX
76.42	11.32	7.55	0.0	4.72	0.0

Provides: Ing. Zuzana Tkáčová, Ing.Paed.IGIP.

Date of last modification: 16.03.2024

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: ÚINF/

**Course name:** Essentials of Informatics

BSSMI/22

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:** 

Course level: I.

Prerequisities: ÚINF/PSIN/15 and ÚINF/PAZ1b/15 and ÚINF/OSY/24 and ÚINF/AFJ1a/15 and

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: 4

A	В	С	D	Е	FX
0.0	50.0	0.0	50.0	0.0	0.0

**Provides:** 

Date of last modification: 07.02.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID: Course name:** Final Thesis Seminar 1 KSSFaK/SZP1/15 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:** 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: 121 abs n 95.04 4.96 Provides: prof. PhDr. Marián Andričík, PhD. Date of last modification: 11.08.2022 Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID: Course name:** Final Thesis Seminar 2 KSSFaK/SZP2/15 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: 6. Course level: I. **Prerequisities:** KSSFaK/SZP1/15 **Conditions for course completion: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 104 abs n 95.19 4.81 Provides: prof. PhDr. Marián Andričík, PhD. Date of last modification: 11.08.2022 Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Folk Literature KSSFaK/LUDS/07 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: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 563 C Α В D Е FX 9.41 23.09 31.08 20.6 10.66 5.15

Provides: PhDr. Lukáš Šutor, PhD.

Date of last modification: 16.11.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Fundamentals of Experimental Phonetics 1 KSSFaK/ZEF1/15 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: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 146

A	В	С	D	Е	FX
45.21	16.44	23.29	8.22	6.16	0.68

**Provides:** Ing. Eva Kiktová, PhD.

Date of last modification: 11.10.2024

University: P. J. Šafárik University in Košice

**Faculty:** Faculty of Arts

Course ID:

Course name: Fundamentals of Experimental Phonetics 2

KSSFaK/ZEF2/15

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:** KSSFaK/ZEF1/15

**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	В	С	D	Е	FX
57.14	42.86	0.0	0.0	0.0	0.0

Provides: Ing. Eva Kiktová, PhD.

Date of last modification: 10.10.2024

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

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University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID:
KSSFaK/ZASL/15

Course name: Fundamentals of Slavic Studies and Old Church Slavonic

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: 3** 

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

Course level: I.

**Prerequisities:** 

**Conditions for course completion:** 

**Learning outcomes:** 

**Brief outline of the course:** 

**Recommended literature:** 

Course language:

**Notes:** 

Course assessment

Total number of assessed students: 297

A	В	С	D	Е	FX
43.43	33.0	13.8	7.74	2.02	0.0

Provides: doc. PhDr. Marianna Sedláková, PhD.

Date of last modification: 26.09.2024

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: Course name: Fundamentals of Sociology

KSSFaK/ZS/15

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.

**Prerequisities:** 

**Conditions for course completion:** 

**Learning outcomes:** 

**Brief outline of the course:** 

**Recommended literature:** 

Course language:

**Notes:** 

Course assessment

Total number of assessed students: 343

A	В	С	D	Е	FX
23.62	26.24	20.41	16.03	9.62	4.08

Provides: doc. Mgr. Alexander Onufrák, PhD.

Date of last modification: 19.03.2025

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

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University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: Course name: Fundamentals of Theory and Practice of Literary Translation

KSSFaK/ZTPP/15

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:** 3.

Course level: I.

**Prerequisities:** 

**Conditions for course completion:** 

**Learning outcomes:** 

**Brief outline of the course:** 

**Recommended literature:** 

Course language:

**Notes:** 

Course assessment

Total number of assessed students: 183

A	В	С	D	Е	FX
18.03	45.9	30.6	4.92	0.0	0.55

Provides: prof. PhDr. Marián Andričík, PhD.

Date of last modification: 03.06.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ Course name: Getting to know the Student in Education POŽ/21 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: 141 C Α В D Е FX 61.7 26.24 6.38 2.13 0.0 3.55

Provides: PaedDr. Michal Novocký, PhD., Mgr. Beáta Sakalová, PhD.

Date of last modification: 12.03.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ Course name: Inclusive Pedagogy **INP/17** 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: 138 C Α В D Е FX 71.74 21.74 29 1.45 2.17 0.0 Provides: PaedDr. Michal Novocký, PhD. Date of last modification: 14.09.2024

University: P. J. Šafárik University in Košice

**Faculty:** Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Information and Communication Technologies

IKTP/15

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:**

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:**

- 1.Information sheet of the subject. ÚINF / IKTP, content of the exercise, teaching resources, evaluation of the subject, examples of projects,
- e-mail (message structure, attachments, addresses, signature, filters),
- 2.WWW (advanced information search, bookmarks naming, organizing, exporting, importing, feeds iGoogle)
- 3. Word (font, search and replace, inserting links, symbols and images, tabs, line breaks, paragraphs, pages, multi-column rate, tables)
- 4. Word (paragraph styles, sections, header and footer, content and index creation)
- 5. Word (revision, mass correspondence, creation of forms, printing the document to the printer and to PDF)
- 6. Word (overview of typographic rules, project creation 1 design of structure and content)
- 7. Excel (workbook, sheet, table, cells (cell format), formulas (aggregation functions), data filtering, graphs)
- 8. PowerPoint (inserting slides with different layouts, tables, graphs, multimedia objects, changing designs, creating a presentation by importing a text file),
- submission of PROJEKT1 (text in the style of the final thesis) by e-mail to lubomirsnajder@gmail.com (Subject: IKTP projekt1)
- 9.PowerPoint (slide master, slide numbering, presentation navigation links, buttons, image compression, line color change)
- 10.PowerPoint (custom animations, presentation timing, annotations, printing the presentation and its outline, running the presentation)
- 11 PowerPoint (project creation2 structure and content design)

- 12. Presentation PROJEKT2 (PowerPoint presentation)
- 13. Presentation PROJEKT2 (PowerPoint presentation)

#### **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: <a href="http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-SylabusV50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-SylabusV50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-SylabusV50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-SylabusV50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-SylabusV50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-SylabusV50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V5.0/20090630ECDL-Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/buxus/docs//interne\_informacie/Sylabus\_V50">http://www.ecdl.sk/

# Course language:

Slovak or English

#### **Notes:**

#### **Course assessment**

Total number of assessed students: 1035

A B C D E FX
65.6 17.78 6.86 3.57 1.64 4.54

Provides: doc. RNDr. L'ubomír Antoni, PhD.

Date of last modification: 23.11.2021

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ Course name: Integration and Inclusion in School Practice IIŠP/21 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: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 114 C Α В D Е FX 50.0 35.09 8.77 4 39 0.88 0.88

Provides: PaedDr. Michal Novocký, PhD., Mgr. Zuzana Vagaská, PhD.

**Date of last modification:** 14.09.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID: Course name:** Introduction to Corpus Linguistics KSSFaK/UKL/19 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: 9 C Α В D Е FX 11.11 33.33 55.56 0.0 0.0 0.0

Provides: PhDr. Lucia Jasinská, PhD.

Date of last modification: 11.08.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Introduction to Language Studies KSSFaK/UVJA/15 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: 3 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: 1056

Α	В	С	D	Е	FX
5.68	11.55	15.72	24.81	15.91	26.33

**Provides:** PhDr. Lucia Jasinská, PhD.

Date of last modification: 11.08.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course name:** Introduction to Literary Studies

KSSFaK/UVLI/15

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: 3** 

**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: 556

A	В	С	D	Е	FX
5.94	7.01	11.15	19.42	21.94	34.53

Provides: doc. PaedDr. Ivica Hajdučeková, PhD.

Date of last modification: 25.09.2024

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Introduction to artificial intelligence

UUI/23

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:**

- 1. Participation in exercises (max. 3 absences per semester)
- 2. Take the Elements of AI course (with certificate)
- 3. Write an essay on the given topic (min. 50% points)
- 4. Develop and present a AI implementation proposal project (min. 50% points)

# **Learning outcomes:**

After completing the course, students can

- To identify the basic application areas of the use of AI nowadays
- Characterize basic AI tools and procedures
- Critically analyze the acquired knowledge, reevaluate it and use it in practice
- Discuss the ethical, legal and social aspects of using AI
- Propose the possibilities of using AI in the chosen field of science, research, industry, art or everyday life

### **Brief outline of the course:**

- 1. First encounter with artificial intelligence what is and what is not AI, basic terminology, domains of AI
- 2. UI tools and procedures
- 3. Machine learning
- 4. Neural networks
- 5. Robotics and AI
- 6. AI around us
- 7. AI in art and entertainment
- 8. Chatbots and linguistic models
- 9. Ethical, legal and social applications of AI
- 10. Design Thinking exercises: AI implementation design project
- 11. Projects presentations

#### **Recommended literature:**

Elements of AI (https://course.elementsofai.com/)

Microsoft Azure AI fundamentals: get started with artificial intelligence (https://learn.microsoft.com/sk-sk/training/paths/get-started-with-artificial-intelligence-on-azure/?

wt.mc id=academic-77998-cacaste)

People + AI guidebook (https://pair.withgoogle.com/guidebook/)

Fan, S.: will AI replace us? A primer for the 21st century. Thames&Hudson, 2019. ISBN 978-0-500-29457-4

Using AI for social good (https://ai.google/education/social-good-guide/)

Europe's approach to artificial intelligence: how AI strategy is evolving (https://www.accessnow.org/cms/assets/uploads/2020/12/europes-approach-to-ai-strategy-is-evolving.pdf)

The essential AI handbook for leaders (https://peltarion.com/peltarions-essential-ai-handbook-for-leaders.pdf)

# Course language:

Slovak

#### **Notes:**

### **Course assessment**

Total number of assessed students: 22

A	В	С	D	Е	FX
100.0	0.0	0.0	0.0	0.0	0.0

Provides: Ing. Zuzana Tkáčová, Ing.Paed.IGIP.

Date of last modification: 07.03.2023

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Introduction to cognitive and neural sciences

UKN/24

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., 5.

Course level: I., II., N

**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-131: †978-0262701099

# Course language:

Slovak or English

# **Notes:**

Content prerequisites:

Algebra, programming (Matlab).

# **Course assessment**

Total number of assessed students: 9

A	В	С	D	Е	FX
44.44	0.0	11.11	0.0	44.44	0.0

**Provides:** doc. Ing. Norbert Kopčo, PhD., univerzitný profesor, Ing. Peter Lokša, PhD., RNDr. Keerthi Kumar Doreswamy, PhD., Ing. Udbhav Singhal, Myroslav Fedorenko

Date of last modification: 19.03.2024

	COURSE INFORMATION LETTER
University: P. J. Šafá	rik University in Košice
Faculty: Faculty of A	rts
Course ID: ÚINF/ UIB1/21	Course name: Introduction to information security
Course type, scope a Course type: Lectur Recommended cour Per week: 2/2 Per Course method: pre	re / Practice rse-load (hours): study period: 28 / 28
Number of ECTS cr	edits: 5
Recommended seme	ster/trimester of the course: 3.
Course level: I.	
Prerequisities:	
Homeworks (30% of	the completion: ssing the course is: 1. Exercise tasks (20% of the total number of points), 2. the total number of points), 3. Written final theoretical exam (25% of the total Written final practical exam (25% of the total number of points).
	cation is an understanding of the basic concepts of information security from and procedural views of point.
management, 3. Risk security, 5. Continuing Introduction to crypt resources security and	formation security and information security model, 2. Information security and risk management, 4. Legal, normative and ethical aspects of information ty management of activities, processes and security incidents handling, 6. ology, 7. Access control, 8. Physical and environmental security, 9. Human d social engineering, 10. End point security and malicious code, 11. Computer Application security, 13. Final exam.
Cyber Security Body Jason, Awais RASHI Security: A Straightfo PELTIER, Thomas, A Security Fundamenta	Awais RASHID, Steve SCHNEIDER a Howard CHIVERS. CyBOK: The of Knowledge. The National Cyber Security Centre, 2021, 2. ANDRESS, D, Steve SCHNEIDER a Howard CHIVERS. Foundations of Information orward Introduction. 1. No Starch Press, 2019. ISBN 978-1718500044, 3. Awais RASHID, Steve SCHNEIDER a Howard CHIVERS. Information ls. 2. Boca Raton: Auerbach Publications, 2013. ISBN 978-1138436893.
Course language: Slovak or English	

**Notes:** 

Course assessment							
Total number of assessed students: 180							
Α	В	С	D	Е	FX		
44.44 25.0 19.44 6.11 2.22 2.78							

**Provides:** doc. RNDr. JUDr. Pavol Sokol, PhD. et PhD., RNDr. Eva Marková

**Date of last modification:** 04.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

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

UNS1/15

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., N

# **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, their basic types, 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: 535

A	В	С	D	Е	FX
24.11	17.01	20.19	16.45	18.69	3.55

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

Date of last modification: 23.11.2021

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: ÚINF/ Course name: Introduction to study of informatics MZI/21 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:** Understanding of basic mathematical notions **Learning outcomes:** Understanding of basic mathematical notions **Brief outline of the course:** 1. Mathematical text 2. Connections and quantifiers 3. Classes and sets 4. Other operarions operácie 5. Relations 6. Relational algebra 7. Orderings 8. Equivalences 9. Functions 10. Cardinalities 11. Infinities 12. Cardinal arithmetics **Recommended literature:** https://ics.upjs.sk/~krajci/skola/vyucba/jesen/predmety/MZI.html Course language: Slovak **Notes:** Course assessment Total number of assessed students: 414 В  $\mathbf{C}$ D E FX A 38.16 20.29 1.69 22.95 13.04 3.86

Page: 70

Provides: prof. RNDr. Stanislav Krajči, PhD.

**Date of last modification:** 23.11.2021

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course name: Journalistic Genres in Print and Electronic Media I **Course ID:** KSSFaK/ ZZvPaEM1/15 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: Conditions for course completion: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 562

A	В	С	D	Е	FX
19.4	13.7	21.53	17.97	19.4	8.01

Provides: PhDr. Marián Gladiš, PhD.

Date of last modification: 11.03.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: Course name: Journalistic Genres in Print and Electronic Media II

KSSFaK/

ZZvPaEM2/15

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.

**Prerequisities:** KSSFaK/ZZvPaEM1/15

**Conditions for course completion:** 

**Learning outcomes:** 

**Brief outline of the course:** 

**Recommended literature:** 

Course language:

**Notes:** 

Course assessment

Total number of assessed students: 433

A	В	С	D	Е	FX
28.41	29.33	20.55	12.24	9.01	0.46

**Provides:** Mgr. Peter Getlík, PhD.

Date of last modification: 07.10.2024

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

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University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Linguistic Proofreading KSSFaK/JK/22 Course type, scope and the method: Course type: Seminar 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: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 7 C A В D Е FX 100.0 0.0 0.0 0.0 0.0 0.0 Provides: PhDr. Lucia Jasinská, PhD. Date of last modification: 11.08.2022 Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Literary Excursion 1 KSSFaK/ EXKUbm/12 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: 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: 279 C В D E FX A 84.23 7.17 0.72 0.36 0.0 7.53

Provides: doc. Marián Milčák, PhD., prof. PhDr. Marián Andričík, PhD., doc. Mgr. Markéta Andričíková, PhD., doc. PhDr. Marianna Sedláková, PhD., PhDr. Jozef Bilský, PhD.

Date of last modification: 25.02.2025

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Literature in Film and Television KSSFaK/LFT/07 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: 336 C D Ε Α В FX 23.81 40.18 26.79 8.04 1.19 0.0

Provides: prof. Mgr. Ján Sabol, PhD., ArtD., Mgr. Peter Getlík, PhD.

Date of last modification: 03.02.2025

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚMV/ | **Course name:** Mathematics I for informaticians

MTI4a/22

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:**

Two tests, completion of individual and group homework. Assessment is given on the basis of semestral evaluation and examination test. The ability to solve selected types of problems (without context/with context) also in combination with mathematical software is evaluated. Furthermore, the understanding of concepts and relationships between them (conceptual questions / tasks) is taken into account. A total of 100 points can be obtained (60 points during the semester and 40 points for the exam test). In addition, it is possible to obtain bonus points for various activities (solving bonus tasks, active approach to the subject during the semester ...). A minimum of 25 points (out of a possible 60) and the submission of a sufficient number of individual assignments according to the instructions are required from the semester.

### Learning outcomes:

To obtain basic mathematical knowledge about the divisibility of integers, congruences, number systems, vectors, matrices and determinants, as well as the functions of one real variable. To get acquainted with the applications (including the information technologies) 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:

Introduction to the teaching system, technologies and mathematical software (1 week). Integers and divisibility, prime numbers and congruences, applications of congruences and residue classes - basic properties of integer divisibility, canonical decomposition of a number, greatest common divisor and least common multiple of numbers, Euclidean algorithm, solution of (linear) Diophantine equations and (linear) congruences, addition and subtraction of residue classes (3 weeks). Number systems and conversions between them - positional number systems and conversions between them, arithmetic operations in different number systems (1 week). Vectors, matrices, determinants, their applications and introduction to analytical geometry - vector and matrix operations, scalar and vector product, angles of vectors, calculation of matrix determinants (from definition, Saruss rule, row/column expansion), inverse matrix determination (using determinant and adjoint matrix, Gaussian-Jordan method), solution of linear systems equations (Gaussian elimination method, Cramer's rule, substitution/addition method), eigenvalues/eigenvectors of a matrix (3 weeks). Introduction to (elementary) functions - domains and graphs of functions, basic properties of

functions (boundedness, monotonicity, parity, periodicity), operations with functions, inverse function, basic properties of elementary functions (polynomial, power, exponential, logarithmic, trigonometric, cyclometric) (2 weeks).

### **Recommended literature:**

Hallet D. H. (2014). Applied Calculus. John Wiley & Sons.

Koshy T. (2007). Elementary Number Theory with Applications. Elsevier.

Judson T. W., Austin S. F. (2019). Abstract Algebra: Theory and Applications. GNU Free Documentation License.

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: 92

A	В	С	D	Е	FX
7.61	4.35	14.13	33.7	30.43	9.78

Provides: RNDr. Stanislav Basarik, PhD.

Date of last modification: 18.03.2024

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚMV/ **Course name:** Mathematics II for informaticians

MTI4b/22

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: 2.

Course level: I.

Prerequisities: ÚMV/MTI4a/22

### **Conditions for course completion:**

Two tests, completion of individual and group homework during the semester. Assessment is given on the basis of semestral evaluation and examination test. The ability to solve selected types of problems (without context / with context ) also in combination with mathematical software is evaluated. Furthermore, the understanding of concepts and relationships between them (conceptual questions / tasks) is taken into account. A total of 100 points can be obtained (60 points during the semester and 40 points for the exam test). In addition, it is possible to obtain bonus points for various activities (solving bonus tasks, active approach to the subject during the semester ...). A minimum of 25 points (out of a possible 60) and the submission of a sufficient number of individual assignments according to the instructions are required from the semester.

### Learning outcomes:

Gain basic knowledge of differential and integral calculus of functions of one real variable. Also get acquainted with the functions of several (mostly two) variables.

#### **Brief outline of the course:**

Differential calculus of functions of one real variable - limits and continuity of functions, derivatives of functions, applications of derivatives of functions (4 weeks). Integral calculus of functions of one real variable - primitive function, substitution method, per partes, applications of a definite integral, improper integrals (3 weeks). Functions of several (two) variables - domains and visualization, function limits, partial derivatives, determination of (local) extremes of functions (3 weeks).

### **Recommended literature:**

Boelkins M., Austin D., Schlicker S. (2018). Active Calculus. 978-1085940856.

Hallet D. H. et al. (2012). Calculus: Single & Multivariable Variable. Wiley.

Hallet D. H. (2014). Applied Calculus. John Wiley & Sons.

Hallet D. H. et al. (2017). Calculus: Single Variable. Wiley.

Hartman G. et al. (2018). APEX Calculus. 978-1514225158.

Schlicker S., Austin D., Boelkins M. (2018). Active Calculus - Multivariable. 978-1548655525.

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

# Course language: Slovak

Notes:

**Course assessment** 

Total number of assessed students: 57

A	В	С	D	Е	FX
12.28	10.53	17.54	36.84	17.54	5.26

Provides: RNDr. Stanislav Basarik, PhD.

Date of last modification: 18.03.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ Course name: Mentoring and Coaching in School Practice MKŠP/21 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: 85  $\mathbf{C}$ Α В D Е FX 88.24 9.41 2.35 0.0 0.0 0.0 Provides: Mgr. Zuzana Vagaská, PhD., Mgr. Beáta Sakalová, PhD.

Date of last modification: 18.09.2024

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University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ Course name: Multiculturalism and Multicultural Education MMKV/17 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: 289

Α	В	С	D	E	FX
39.79	43.94	14.88	0.69	0.35	0.35

Provides: PaedDr. Michal Novocký, PhD.

Date of last modification: 12.03.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Old Slovak Literature KSSFaK/SSL/22 Course type, scope and the method: Course type: Lecture / Seminar Recommended course-load (hours): Per week: 1 / 1 Per study period: 14 / 14 Course method: present **Number of ECTS credits: 3 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: 439 C Α В D Е FX

Provides: PhDr. Lukáš Šutor, PhD.

12.53

Date of last modification: 16.11.2024

17.54

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

31.21

17.08

14.12

7.52

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Operating systems

OSY/24

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.

**Prerequisities:** ÚINF/PRP2/15

**Conditions for course completion:** 

Oral exam

### **Learning outcomes:**

Student obtains base knowledge about the properties and internal processes of operating systems, their structure and concept. By completing the course, the student will gain a comprehensive picture of the life cycle of processes, their planning and communication between them. He will also gets a knowledge of physical, logical and virtual memory management and understands synchronization as well as phenomena such as deadlocks or starvation. The acquired knowledge will enable the student to understand the behavior of the operating system, which leads to gaining the ability to intervene with running operating system, eventually optimize it.

#### **Brief outline of the course:**

- 1. History, development, user interface and structure of operating systems.
- 2. Kernel of the operating system and system calls, implementation.
- 3. Process definition, structure, life cycle, implementation.
- 4. Process planning algorithms, multiprocessing.
- 5. Process inter-process communication.
- 6. Thread definition, structure, life cycle, implementation.
- 7. Synchronization of processes and system resources.
- 8. Deadlock and starvation prevention, detection, recovery.
- 9. Memory definition, types of memories, usage, volatility, DMA.
- 10. Memory allocation strategies, paging, fragmentation.
- 11. Memory MMU, TLB, MPU, segmentation.
- 12. Memory virtual memory management strategies.
- 13. File system definition, structure, implementation.
- 14. File system file, directory, attributes, access control, ACL.

### **Recommended literature:**

- 1. SILBERSCHATZ, Abraham, Peter B. GALVIN a Greg GAGNE. Operating System Concepts. 10th Revised edition. New York, United States: John Wiley, 2021. ISBN 9781119800361.
- 2. TANENBAUM, Andrew, Herbert BOS. Modern Operating Systems. 4th edition. London, UK: Pearson Education Limited, 2014. ISBN 9781292061429.

- 3. The Linux Kernel documentation. Linux Kernel Library [online]. Dostupné z: https://www.kernel.org/doc/html/latest/
- 4. DOWNEY, Allen B. The Little Book of Semaphores [online]. Version 2.2.1. Green Tea Press, 2016. Dostupné z: https://greenteapress.com/semaphores/LittleBookOfSemaphores.pdf

# Course language:

Slovak or English

## **Notes:**

### **Course assessment**

Total number of assessed students: 93

A	В	С	D	Е	FX
22.58	15.05	24.73	21.51	15.05	1.08

Provides: RNDr. PhDr. Peter Pisarčík, doc. RNDr. JUDr. Pavol Sokol, PhD. et PhD.

Date of last modification: 19.03.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Orthography and Orthoepy KSSFaK/ORT/07 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:** 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: 1028 C Α В D Е FX 8.56 11.09 12.94 13.13 26.17 28.11

**Provides:** Mgr. Lena Ivančová, PhD.

Date of last modification: 11.08.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ Course name: Pedagogy Pg/15 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: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 1331 C Α В D Е FX 21.79 30.65 23.44 13.45 8.41 2.25

Provides: PaedDr. Michal Novocký, PhD., doc. PaedDr. Renáta Orosová, PhD.

Date of last modification: 14.09.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Phonetics KSSFaK/FONT/15 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: 4 Recommended semester/trimester of the course:** 1. Course level: I. **Prerequisities: Conditions for course completion: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 459 C Α В D Е FX

Provides: PhDr. Iveta Bónová, PhD., univerzitná docentka

10.89

Date of last modification: 27.09.2024

4.58

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

20.92

23.09

18.52

22.0

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Phonology KSSFaK/FONF/15 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: 4 Recommended semester/trimester of the course:** 2. Course level: I. **Prerequisities: Conditions for course completion: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 362 C Α В D Е FX 7.73 14.36 19.89 22.38 18.78 16.85

Provides: PhDr. Iveta Bónová, PhD., univerzitná docentka

Date of last modification: 04.02.2025

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course name:** Positive Psychology

KPPaPZ/PP/15

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 of Study Results:

The evaluation of study results for the course is conducted through continuous assessment. Active participation in seminars (a maximum of 2 absences is allowed) accounts for 20%; a presentation during the exercises on a pre-assigned date accounts for 30%; and the preparation and submission of a group year-long methodological guide on Positive Psychology accounts for 50%.

Final Grading Scale:

A: 100 – 90%

B: 89 - 80%

C: 79 - 70%

D: 69 - 60%

E: 59 - 50%

FX: 49% or less – failed and must revise the assignment where a low score was obtained.cademic information system of the UPJŠ.

### **Learning outcomes:**

Knowledge: Students will gain basic knowledge about the origins, foundations, and applications of Positive Psychology as a new and dynamically developing field of psychology. They will become familiar with research in this area and various perspectives on personal well-being, happiness, and life meaning. They will acquire an overview of the main theoretical approaches in Positive Psychology and their application in the context of individuals and society, with an emphasis on their use in educational settings.

Skills: Students will develop the ability to independently and critically address current topics in Positive Psychology, such as positive emotions, interpersonal relationships, hope, optimism, gratitude, and wisdom. They will learn to apply Positive Psychology principles in designing programs aimed at promoting personal well-being and developing positive traits, which can be utilized in working with children and youth in school environments.

Competencies: After completing the course, students will be able to effectively apply the principles of Positive Psychology in educational contexts, such as fostering positive interpersonal relationships and developing optimism and gratitude in students. They will be prepared to

participate in the creation and implementation of programs focused on personal development and mental well-being, contributing to the creation of a positive and supportive school environment.

### **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., & Hewstone, M. (2004). Emotion and motivation. Blackwell.

Deci, E., & Ryan, R. M. (2002). Handbook of self-determination research. Rochester.

Křivohlavý, J. (2003). Pozitivní psychologie. Praha: Portál.

Křivohlavý, J. (2007). Psychologie vděčnosti a nevděčnosti. Praha: Grada.

Křivohlavý, J. (2012). Psychologie moudrosti a dobrého života. Praha: Grada.

Křivohlavý, J. (2013). Psychologie pocitu štěstí. Praha: Grada.

McAdams, D. P. (2002). The person. New York.

Seligman, M. E. P., & Csikszentmihalyi, M. (Eds.). (2000). Positive psychology [Special issue]. American Psychologist, 55(1).

Říčan, P. (2007). Psychologie náboženství a spirituality. Praha: Portál.

Slezáčková, A. (2012). Průvodce pozitivní psychologií. Praha: Grada.

Carr, A. (2022). Positive psychology: The science of wellbeing and human strengths (3rd ed.). Routledge.

### Course language:

### **Notes:**

### Course assessment

Total number of assessed students: 517

A	В	С	D	Е	FX
98.45	1.16	0.19	0.0	0.19	0.0

Provides: doc. Mgr. Gabriel Baník, PhD.

Date of last modification: 04.02.2025

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Principles of computers

PRP2/15

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:**

Graded activities: assignments, mid semester exam, final exam

### **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:**

- 1. Computers of von Neumannovho type, brief history of computer science.
- 2. Encoding of integers, real numbers and arithmetic operations. Encoding of symbols.
- 3. Logic functions and their realization and optimisation.
- 4. Combination circuits. Realization of basic functional and control elements on computer circuits.
- 5. Arithmetic logic unit ant its realization.
- 6. Sequential circuits, memory cell, organization of memory matrix, types of memories.
- 7. Machine cycle.
- 8. Types of instruction and instructions sets.
- 9. Instruction cycle and processing of instructions.
- 10. Memory and memory subsistem.
- 11. Communication between processor and peripheral devices. Input output devices, mechanism of interruption in computer, direct memory access. Functionality of device drivers. Device controllers and functionality.
- 12. Portability of programs. External and peripheral memories their principles and their use. Graphical adapters, monitors, printers, digital scanners.

### **Recommended literature:**

- 1. STALLINGS, William. Computer Organization and Architecture. Prentice Hall, 2002. ISBN 978-0-13-410161-3.
- 2. DEMBOWSKI, Klaus. Mistrovství v hardware. Computer Press, 2009. ISBN 978-80-251-2310-2.
- 3. MINASI, Mark. Velký průvodce hardwarem. Grada, 2002. ISBN 978-80-251-2310-2.

# Course language:

Slovak or English

### **Notes:**

### **Course assessment**

Total number of assessed students: 341

A	В	С	D	Е	FX
28.45	15.54	15.84	13.78	22.29	4.11

Provides: RNDr. PhDr. Peter Pisarčík

Date of last modification: 23.11.2021

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

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

PBS/15

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: 418

abs	n
94.98	5.02

Provides: RNDr. Miroslav Opiela, PhD., RNDr. Dávid Varga

Date of last modification: 08.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Programming environments in schools I

SPP1a/15

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: 48

A	В	С	D	Е	FX
27.08	18.75	33.33	8.33	8.33	4.17

Provides: PaedDr. Ján Guniš, PhD., univerzitný docent

Date of last modification: 31.08.2021

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: ÚINF/ C

Course name: Programming environments in schools II

SPP1b/22

**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:** 5.

Course level: I., N

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: 34

A	В	С	D	Е	FX
32.35	20.59	14.71	20.59	2.94	8.82

Provides: doc. RNDr. L'ubomír Šnajder, PhD.

Date of last modification: 08.02.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Programming language Python

PJP/25

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: 4

Recommended semester/trimester of the course: 4.

Course level: I., N

Prerequisities: ÚINF/PAZ1a/15

## **Conditions for course completion:**

At least 50 % of the marks in the continuous assessment

A minimum of 50 % marks in the mid-term test and the final exam practical test

### **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 descrialization 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, 2011. Ponořme se do Pythonu(u) 3 [online]. Praha: CZ.NIC, z. s. p. o. ISBN 978-80-904248-2-1. Available at: https://www.nic.cz/files/edice/python 3.pdf

PIRNAT, Mike, 2015. How to Make Mistakes in Python [online]. Boston: O'Reilly Media. ISBN 978-1-4919-3447-0. Available at: https://www.dbooks.org/how-to-make-mistakes-in-python-1491934476/

STACK OVERFLOW CONTRIBUTORS, 2018. Python® Notes for Professionals [online]. B.m.: GoalKicker. Available at: https://books.goalkicker.com/PythonBook/PythonNotesForProfessionals.pdf

ROSEMAN, Mark, 2024. Modern Tk Best Practices [online]. 2024. Available at: https://tkdocs.com/

## Course language:

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

### **Notes:**

### **Course assessment**

Total number of assessed students: 2

A	В	С	D	Е	FX
50.0	0.0	0.0	0.0	50.0	0.0

**Provides:** PaedDr. Ján Guniš, PhD., univerzitný docent, RNDr. Zoltán Szoplák, doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 08.03.2025

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Programming of robotic kits

PRS/15

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:**

Evaluation of independent work with kits and in educational programming environments in solving robotic mini-projects.

Creation of own task and presentation of the solution with methodological recommendations.

### **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:**

- 1. Robotic kit (Lego Mindstorms EV3 and Spike Prime) parts, motors, sensors, basics of building mechanical parts of models
- 2. Programming of robotic models in Lego Education Mindstorms EV3 and Classroom, Lego Education Spike branching commands, cycles, blocks, events, parallel processes, working with sensors, datalogging. Creating mini-projects (eg explorer, rescuer, parking, Super Cleanup, Life Hacks, Rain or shine?)
- 3. Programming of robotic models in the block programming environment EV3 and Spike creation of mini-projects
- 4. Robotic competitions, ideas for more demanding projects.
- 5. Creation and presentation of the final project a programmed robotic model (eg going through a maze, sports, rescuer) with 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. Pavel Petrovič, http://robotika.sk/events/18Skolenia/priruckaEV3.pdf
- 4. Get ready with Lessons: https://education.lego.com/en-us/lesson
- 5. LEGO® Education Professional Development, https://education.lego.com/en-us/professional-development#about
- 6. SCRATCH Programming Lessons, https://primelessons.org/en/Lessons.html,

#### Course language: Slovak **Notes: Course assessment** Total number of assessed students: 54 C A В D E FX 53.7 24.07 9.26 11.11 1.85 0.0

Provides: Ing. Angelika Hanesz

Date of last modification: 23.11.2021

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

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

**PWS/25** 

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 or ÚINF/DBS/15) and (ÚINF/PAZ1a/15 or ÚINF/PRG1/15)

### **Conditions for course completion:**

JavaScript assignment – 5 points

PHP assignment (1) - 10 points

PHP assignment (2) - 10 points

MySQL assignment – 10 points

PHP, MySQL, Security assignment – 5 points

Error (non-grammatical) in course texts, suggestion for improving the learning materials, or proposal for a new topic to include in the materials – up to 5 bonus points.

Late submission of an assignment – (-1 point) \* number of weeks late

The final grade will be awarded based on the total number of points in accordance with the grading scale:

36 <= number of points - A

 $32 \le \text{number of points} \le 36 - B$ 

 $28 \le \text{number of points} \le 32 - C$ 

 $24 \le \text{number of points} \le 28 - D$ 

 $20 \le \text{number of points} \le 24 - E$ 

number of points < 20 - Fx

### **Learning outcomes:**

An overview of modern technologies for creating dynamic websites. Describing and appliying 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: 200

A	В	С	D	Е	FX
9.5	8.5	9.5	9.0	22.5	41.0

Provides: PaedDr. Ján Guniš, PhD., univerzitný docent

Date of last modification: 02.05.2025

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: ÚINF/ | Course name: Programming, algorithms, and complexity

PAZ1a/15

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.

# **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: 961

A	В	С	D	Е	FX
16.86	8.64	12.28	18.73	13.94	29.55

**Provides:** RNDr. Juraj Šebej, PhD., RNDr. Miroslav Opiela, PhD., RNDr. Viktor Pristaš, RNDr. Richard Staňa, Mgr. Viktor Olejár, Mgr. Dominika Kotlárová, doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 04.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: ÚINF/ | Course name: Programming, algorithms, and complexity

PAZ1b/15

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.

**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: 1356

A	В	С	D	Е	FX
14.97	7.82	10.62	18.88	20.65	27.06

**Provides:** RNDr. Juraj Šebej, PhD., RNDr. Miroslav Opiela, PhD., RNDr. Viktor Pristaš, Mgr. Dominika Kotlárová, doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 04.01.2022

University: P. J. Šafárik University in Košice

**Faculty:** Faculty of Arts

Course ID: ÚINF/ | Course name: Programming, algorithms, and complexity

PAZ1c/17

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

Course method: present

**Number of ECTS credits: 5** 

Recommended semester/trimester of the course: 3.

Course level: I.

Prerequisities: ÚINF/PAZ1a/15

## **Conditions for course completion:**

Conditions for continuous evaulation: Active participation in exercises.

Conditions for the final evaluation: Implementation and presentation of one or two team projects with sufficient score. Criteria for obtaining points are listed on the course page https://paz1c.ics.upjs.sk/

## **Learning outcomes:**

Ability to design and implement more complex applications with a three-tier architecture, relational database and standard design patterns. The ability to create a REST server in the Spring boot framework and a simple Angular application that can communicate with this server.

## **Brief outline of the course:**

- 1. Identification of Classes, Methods and Instance Variables, Entities, Unit Tests and JUnit.
- 2. Introduction to JavaFX, FXML, Scene Builder, Controller.
- 3. Model-View-Controller design pattern, Observable and Property classes, model of JavaFx models, persistent layer, entities and identifiers, CRUD in-memory storage, GUI and persistent layer interconnection.
- 4. Design of interfaces for DAO objects. Advantages and disadvantages of associations between classes against manually wired associations. Implementation of the Factory design pattern as an abstraction of wired classes. Enum. Database persistent layer. JDBCTemplate configuration, RowMapper.
- 5. Data input via JDBCTemplate. Associations between classes. Relationships with cardinalities:
- 1:1, 1:M, M:N. RDB design and implementation in code. Design of a more complex data model, ResultSetExtractor.
- 6. Business layer, three-tier application, modal windows, entity modification in JavaFX and MySQL.
- 7. Logging System.out.println as the easiest way to log. Logging with Slf4j. Secure password storage.
- 8. Annotations, work with lambda expressions, generic classes.
- 9. Spring Boot and REST services. Json format.
- 10. Angular installation, TypeScript, DOM model, components and their properties, event capture in components.

- 11. Angular communication between components, forms, input validation.
- 12. Angular services, Observable, injection, communication with REST server via HTTP.

## **Recommended literature:**

- 1. WALLS Craig. Spring in Action. Manning Publications; 5th edition, 2018. ISBN 978-1-617-29494-5.
- 2. ECKEL, B. Thinking in Java. Pearson; 4th edition, 2006. ISBN 0131872486.
- 3. Website of framework Angular. Available online: <a href="https://angular.io/">https://angular.io/</a>

## Course language:

Slovak

### **Notes:**

Content prerequisites: basic programming in Java

## **Course assessment**

Total number of assessed students: 186

A	В	С	D	Е	FX
22.58	10.22	13.98	26.34	23.12	3.76

Provides: RNDr. Viliam Kačala, PhD.

Date of last modification: 04.01.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Psychology KPPaPZ/Ps/15 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: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 978 C D Ε Α В FX 40.49 22.39 14.52 11.04 10.02 1.53

Provides: doc. Mgr. Mária Bačíková, PhD., Mgr. Ondrej Kalina, PhD.

Date of last modification: 04.02.2025

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course name:** Psychology of Everyday Life

KPPaPZ/PKŽ/15

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:**

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: 253

A	В	С	D	Е	FX
46.25	23.32	24.51	4.35	1.19	0.4

Provides: Mgr. Ondrej Kalina, PhD.

Date of last modification: 10.02.2025

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: ÚINF/ Course name: Resolving computer security incidents RPBI/20 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:** The condition for passing the course are homeworks (50% of the total number of points) and the final practical task (50% of the total number of points). **Learning outcomes:** The result of the education is an understanding of the basic approaches to solving computer security incidents from procedural and legal requirements to ways of identifying the security incident and the method of its technical solution. **Brief outline of the course:** 1. Introduction to computer security incident hadling and response, 2. The process of handling and response to computer security incidents and computer security incident response teams, 3. Legal aspects of the computer security incidents handling, 4. Preparing for the security incidents handling and the first response, 5. Introduction to digital forensic analysis, 6. Incident handling and response to computer security incidents in the field of malware, 7. Incident handling and responseto computer security incidents in the field of email communication, 8. Incident handling and response to network security incidents I., 9. Incident handling and response to network security incidents II., 10. Incident handling and response to computer security incidents in the field of web applications I., 11. Incident handling and response to computer security incidents in the field of web applications II., 12. Incident handling and response to cloud security incidents, 13. Incident handling and responseto cyber security incidents in the field of insiders, 14. Final assignment. **Recommended literature:** 1. MURDOCH, Don. Blue Team Handbook: Incident Response Edition: A condensed field guide for the Cyber Security Incident Responder. South Carolina, United States: CreateSpace Independent Publishing Platform, 2014. ISBN 978-1500734756, 2. ANSON, Steve. Applied Incident Response. New York, United States: Wiley, 2020. ISBN 978-1119560265, 3. ROBERTS, Scott. Intelligence-Driven Incident Response: Outwitting the Adversary. Sebastopol, California, United States: O'Reilly Media, 2017. ISBN 978-1491934944. Course language: Slovak or English

**Notes:** 

Content prerequisites: basic knowledge in the field of information security, basics of working with the Linux operating system, basic knowledge of computer networks.

## **Course assessment**

Total number of assessed students: 24

A	В	С	D	Е	FX
54.17	25.0	16.67	4.17	0.0	0.0

Provides: doc. RNDr. JUDr. Pavol Sokol, PhD. et PhD., RNDr. Eva Marková

Date of last modification: 26.09.2021

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: CJP/ Course name: Russian Language for Students of Philology 1

**RUS1/07** 

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.

# **Prerequisities:**

## **Conditions for course completion:**

Active seminar participation (2 absences tolerated), selfstudy, home assignments, tests, dictations, home reading, mini-presentations.

Final assessment = the average of results obtained.

Grading scale: A 100–92%, B 91–85%, C 84–78%, D 77–71%, E 70–65%, FX 64% and less.

## **Learning outcomes:**

Students will acquire basic knowledge of the Russian language (pronunciation, grammar, vocabulary, language interference, etc.), basic language skills (listening, speaking, reading, writing) and communicative language competence (linguistic, sociolinguistic, pragmatic) according to the course syllabus with special reference to topics related to their study programme.

The level of proficiency: A1 (Common European Framework of Reference for Languages).

### **Brief outline of the course:**

Russian alphabet, orthography, pronunciation.

Russian sentence, nouns, verb conjugation, modal and irregular verbs.

Pronouns, numerals, adjectives and adverbs.

Language interference.

Vocabulary development (getting to know, who is who, hobbies and interests, family, friends, people – character traits, countries and nationalities, home town, my university, biography, famous people, etc.)

Home reading - A. P. Chekhov

### **Recommended literature:**

Fozikoš, A., Reiterová, T.: Reálie rusky mluvících zemí. Plzeň, Fraus, 1998

Myronova, H., Gálová, D.: Ruština pro podnikatelskou sféru. Brno: Masarykova

univerzita v Brně, Ekonomicko-správní fakulta, 2003. ISBN 80-210-3258-8. Available at:

www.kj.fme.vutbr.cz/studopory/RU/phrases/BusinessRussian.pdf

Oganesjanová D., Tregubová, J.: Cvičebnice ruské gramatiky. Praha: Polyglot, 2004

+ other materials provided by the lecturer

https://ru.wikisource.org/wiki/

https://gramota.ru/

# **Course language:**

Slovak language

**Notes:** 

## **Course assessment**

Total number of assessed students: 486

A	В	С	D	Е	FX
45.27	16.26	13.58	9.05	5.97	9.88

**Provides:** Mgr. Ivana Kupková, PhD.

**Date of last modification:** 12.09.2024

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: CJP/ | Course name: Russian Language for Students of Philology 2

RUS2/07

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:**

Active seminar participation (2 absences tolerated), home assignments, tests, home reading, minipresentations, selfstudy.

Final assessment = the average of results obtained.

Grading scale: A 93-100%, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64% and less.

## **Learning outcomes:**

Students will acquire a good knowledge of the Russian language (pronunciation, grammar, vocabulary, language interference, etc.), basic language skills (listening, speaking, reading, writing) and communicative language competence (linguistic, sociolinguistic, pragmatic) according to the course syllabus with special reference to topics related to their study programme.

The level of proficiency: A1/A2 (Common European Framework of Reference for Languages).

### **Brief outline of the course:**

Vocabulary development (hobbies, foreign languages, job and duties, travel, plans, in a foreign city, abroad, leisure time, friends, EU, UNO, etc.).

Grammar (nouns, verbs, adjectives and adverbs, verbs in present, past and future tense, modal and irregular verbs).

Language interference, written communication.

Home reading - L.N. Tolstoy, B. Pasternak, Radio UNO - news

#### **Recommended literature:**

Nekolová, V., Camutaliová, I., Vasilieva-Lešková, A.: Ruština nejen pro samouky. Praha: Leda 2007

Baláž, G., Čabala, M., Svetlík, J.: Gramatika ruštiny. Bratislava: SPN 1995

Balcar M.: Ruská gramatika v kostce. Praha, Leda 1999

Fozikoš, A., Reiterová, T.: Reálie rusky mluvících zemí. Plzeň: Fraus 1998

Oganesjanová D., Tregubová, J.: Cvičebnice ruské gramatiky. Praha: Polyglot 2004

+ materials provided by the lecturer

https://ru.wikisource.org/wiki/

UN News in Russian: https://news.un.org/ru/

Euronews in Russian: https://ru.euronews.com/tag/european-union

# **Course language:**

Russian language A1

**Notes:** 

## **Course assessment**

Total number of assessed students: 202

A	В	С	D	Е	FX
41.58	13.86	14.36	7.43	10.4	12.38

**Provides:** Mgr. Ivana Kupková, PhD.

Date of last modification: 06.02.2024

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: CJP/ | Course name: Russian Language for Students of Philology 3

RUS3/08

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:**

Active seminar participation (2 absences tolerated), selfstudy, home assignments, home reading, mini-presentations.

Final assessment = the average of results obtained.

Grading scale: A 93-100%, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64% and less.

## **Learning outcomes:**

Students will acquire greater knowledge of the Russian language (grammar, vocabulary, language interference, etc.), basic language skills (listening, speaking, reading, writing) and communicative language competence (linguistic, sociolinguistic, pragmatic) according to the course syllabus with special reference to topics related to their study programme.

The level of proficiency: A2/B1 (Common European Framework of Reference for Languages).

## Brief outline of the course:

Vocabulary development (interesting towns, places, famous people, travel and acomodation, transport, food, shopping, health and illness, Niznij Novgorod, EU, Slovak-Russian relatios, humanitarian aid, migration, cross-cultural communication, history of interpreting, etc.).

Grammar ((irregular verbs, nouns, adjectives, passive and active voice, pronouns, etc.).

Language interference, written communication, translation of texts, etc.

Home reading

Radio UNO – news

### **Recommended literature:**

Nekolová, V., Camutaliová, I., Vasilieva-Lešková, A.: Ruština nejen pro samouky. Praha, Leda, 2007

Baláž, G., Čabala, M., Svetlík, J.: Gramatika ruštiny. Bratislava, SPN, 1995

Balcar M.: Ruská gramatika v kostce. Praha, Leda, 1999

Fozikoš, A., Reiterová, T.: Reálie rusky mluvících zemí. Plzeň, Fraus, 1998

Oganesjanová D., Tregubová, J.: Cvičebnice ruské gramatiky. Praha, Polyglot, 2004

+ additional handouts of lecturer

http://public-library.narod.ru/

# **Course language:**

Russian language A2

**Notes:** 

# **Course assessment**

Total number of assessed students: 50

A	В	С	D	Е	FX
62.0	20.0	10.0	8.0	0.0	0.0

**Provides:** Mgr. Ivana Kupková, PhD.

**Date of last modification:** 13.03.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ Course name: School Administration and Legislation OLŠ/15 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: 355 C Α В D Е FX 45.92 31.27 13.24 5.92 3.1 0.56

Provides: PaedDr. Michal Novocký, PhD., Mgr. Beáta Sakalová, PhD.

Date of last modification: 14.09.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** KF/ Course name: Selected Topics in Philosophy of Education (General VKFV/07 Introduction) Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present **Number of 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: 52 C Α В D Е FX 63.46 17.31 17.31 1.92 0.0 0.0

Provides: PhDr. Dušan Hruška, PhD.

Date of last modification: 13.04.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: Course name: Self-Marketing

KPPaPZ/SELFM/25

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: 4

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

Course level: I., P

## **Prerequisities:**

## **Conditions for course completion:**

The conditions for passing the subject are as follows: 1. Active participation in exercises. Max. the missed range is 90 min. 2. Submission of the reflection on the selected topic within the specified time. Reflection topic: will be given in the exercise.

The evaluation of the subject and its subsequent completion will be based on clearly and objectively determined requirements, which will be determined in advance and will not change. The aim of the evaluation is to ensure an objective and fair mapping of the student's knowledge while observing all ethical and moral standards. There is no tolerance for fraudulent student behavior in either the teaching or assessment process.

### **Learning outcomes:**

The student is able to understand and explain the basic assumptions of good self-marketing, knows the possibilities for the correct presentation of his own person and understands the related knowledge and principles of personal and communication area. He / she can understand his / her competencies, his / her goals, how to make his / her strengths visible and he / she can apply this knowledge and social and professional skills in the personal and professional sphere of his / her life, which will also improve his / her employment opportunities.

### **Brief outline of the course:**

What is marketing? (Marketing - Mix)

Basics of self-marketing (Personal opinion is crucial, Goal setting, Proper use of opportunity)

Me and my influence (What can I offer? What does he / she have unlike me? How do others see me? Ability to defend one's own opinion, Think positively!, I know how to explore myself - what options do I have?),

Competence (Have your own opinion, How to withstand criticism, Be a team player, Competence at work),

Draw attention to yourself (Voice and word selection, Active in meetings, Present yourself successfully).

### **Recommended literature:**

VÝROST, Jozef - SLAMĚNÍK, Ivan. Sociální psychologie. 2., přepr. a rozš. vyd. Praha : GRADA, 2008. 408 s.

VÝROST, Jozef - SLAMĚNÍK, Ivan. Aplikovaná sociální psychologie I : Člověk a sociální instituce. 1. vyd. Praha : Portál, 1998. 384 s. ISBN 80-7178-269-6.

KOMÁRKOVÁ, Růžena - SLAMĚNÍK, Ivan - VÝROST, Jozef. Aplikovaná sociální psychologie III : Sociálněpsychologický výcvik. 1. vyd. Praha : Grada Publishing, 2001. 224 s. VÝROST, Jozef - SLAMĚNÍK, Ivan. Aplikovaná sociální psychologie II. 1. vyd. Praha : Grada Publishing, 2001. 260 s.

## Course language:

slovak

## **Notes:**

After passing the certification exams from all 4 modules (Teamwork, Selfmarketing, Conflict Management, Communication) the student will receive an ECo-C card and an ECo-C certificate.

### Course assessment

Total number of assessed students: 0

A	В	С	D	Е	FX
0.0	0.0	0.0	0.0	0.0	0.0

Provides: Mgr. Ondrej Kalina, PhD., Mgr. Lenka Hudáková, PhD.

Date of last modification: 04.02.2025

University: P. J. Šafárik University in Košice

**Faculty:** Faculty of Arts

Course ID: ÚINF/ | Course name: Seminar for bachelor thesis for XIb

SZPX/22

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:** 5.

Course level: I.

# **Prerequisities:**

## **Conditions for course completion:**

Conditions for ongoing evaluation:

- 1. Analysis of selected types of educational/assistance software.
- 2. Analysis of selected types of teaching aids (2D/3D/digital, educational kits).
- 3. Analysis of selected types of non-formal computer education (competitions, circles, camps, science festivals, experience centres).

Conditions for the final evaluation:

- 1. Creation of the bachelor thesis assignment (title, objectives, literature, supervisor).
- 2. Creation of an overview of the current state of the studied issue.

Conditions for successful completion of the course:

Fulfillment of all ongoing and final assignments.

## Learning outcomes:

The student will get an idea of the bachelor thesis focused on the creation of educational and assistive software, teaching aids for formal and informal informatics education (its types, structure and life cycle).

The student actively uses educational information resources (publication databases, journals and conference proceedings, educational projects).

The student will create an overview of the current state of teaching of issues related to the selected topic of the bachelor thesis.

#### Brief outline of the course:

- 1. Bachelor theses focused on the creation of educational and assistive software, teaching aids for formal and informal informatics education (types of work, structure of work, life cycle of work)
- 2. Analysis of selected bachelor theses from CRZP.
- 3. Overview of information resources (available publication databases, journals and conference proceedings, educational projects).
- 4. Educational and assistive software development (life cycle, development environments, examples of educational and assistive software).
- 5. Types of teaching aids (2D/3D/digital, educational kits).
- 6. Specifics of formal and informal informatics education (competitions, clubs, camps, science festivals, experience centres).

### **Recommended literature:**

CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. Centrálny register záverečných a kvalifikačných prác [online]. [cited 2022-1-31]. Available from: https://cms.crzp.sk/

Informatics in Education. Vilnius University Institute of Data Science and Digital Technologies.

ISSN 2335-8971 (online). Also available from: https://infedu.vu.lt/journal/INFEDU

COMPUTER SCIENCE TEACHERS ASSOCIATION. Home Page Computer Science Teachers Association [online]. [cited 2022-1-31]. Available from: https://www.csteachers.org/

ASSOCIATION FOR COMPUTING MACHINERY. The ACM Digital Library [online]. [cited 2022-1-31]. Available from: https://dl.acm.org/

SPRINGER NATURE SWITZERLAND AG. Home - Springer [online]. [cited 2022-1-31]. Available from: https://link.springer.com/

UNIVERZITA MATEJA BELA V BANSKEJ BYSTRICI, TECHNICKÁ UNIVERZITA V LIBERCI, 2021. Zborníky medzinárodnej konferencie DidInfo (od roku 2011) [online]. [cited 2022-1-31]. Available from: http://www.didinfo.net/predchozi-rocniky (or http://www.didinfo.net/minule-rocniky)

### Course language:

Slovak and partly English due to selected 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: 0

abs	n
0.0	0.0

Provides: doc. RNDr. L'ubomír Šnajder, PhD.

Date of last modification: 10.02.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Seminar in Written Discourse Analysis 1 KSSFaK/ISEM1/15 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: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 162 C Α В D Е FX

Provides: doc. Marián Milčák, PhD.

19.75

17.28

Date of last modification: 13.09.2023

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

31.48

20.99

7.41

3.09

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Seminar in Written Discourse Analysis 2 KSSFaK/ISEM2/15 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:** 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: 139 C Α В D Е FX 18.71 17.99 19.42 21.58 4.32 17.99

Provides: doc. Marián Milčák, PhD.

Date of last modification: 13.09.2023

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: CJP/ | Course name: Slavonic Language

SJ/15

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:**

Active seminar participation (2 absences tolerated), selfstudy, home assignments, tests, dictations, home reading, mini-presentations.

Final assessment = the average of results obtained.

Grading scale: A 100–92%, B 91–85%, C 84–78%, D 77–71%, E 70–65%, FX 64% and less.

## **Learning outcomes:**

Students will acquire basic knowledge of the Russian language (pronunciation, grammar, vocabulary, language interference, etc.), basic language skills (listening, speaking, reading, writing) and communicative language competence (linguistic, sociolinguistic, pragmatic) according to the course syllabus with special reference to topics related to their study programme.

The level of proficiency: A1 (Common European Framework of Reference for Languages).

### **Brief outline of the course:**

Russian alphabet, orthography, pronunciation.

Russian sentence, nouns, verb conjugation, modal and irregular verbs.

Pronouns, numerals, adjectives and adverbs.

Language interference.

Vocabulary development (getting to know, who is who, hobbies and interests, family, friends, people – character traits, countries and nationalities, home town, my university, biography, famous people, etc.)

Home reading - A. P. Chekhov

### **Recommended literature:**

Nekolová, V., Camutaliová, I., Vasilieva-Lešková, A.: Ruština nejen pro samouky. Praha: Leda, 2007.

Myronova, H., Gálová, D.: Ruština pro podnikatelskou sféru. Brno: Masarykova

univerzita v Brně, Ekonomicko-správní fakulta, 2003. ISBN 80-210-3258-8. Available at:

www.kj.fme.vutbr.cz/studopory/RU/phrases/BusinessRussian.pdf

Fozikoš, A., Reiterová, T.: Reálie rusky mluvících zemí. Plzeň: Fraus, 1998.

Oganesjanová D., Tregubová, J.: Cvičebnice ruské gramatiky. Praha: Polyglot, 2004.

+ other materials provided by the lecturer

https://ru.wikisource.org/wiki/

https://gramota	.ru/								
Course languag Slovak languag	_								
Notes:									
	Course assessment Total number of assessed students: 40								
A	В	С	D	Е	FX				
42.5	30.0	15.0	5.0	5.0	2.5				

Provides: Mgr. Ivana Kupková, PhD.

**Date of last modification:** 12.09.2024

University: P. J. Šafárik University in Košice

**Faculty:** Faculty of Arts

Course ID: Course name: Slovak Interwar Literature

KSSFaK/SMVL/15

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.

**Prerequisities:** 

**Conditions for course completion:** 

**Learning outcomes:** 

**Brief outline of the course:** 

**Recommended literature:** 

Course language:

**Notes:** 

Course assessment

Total number of assessed students: 236

A	В	С	D	Е	FX
16.95	17.37	23.31	19.49	8.05	14.83

Provides: doc. PaedDr. Ivica Hajdučeková, PhD.

Date of last modification: 25.09.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Slovak Literature After 1945 KSSFaK/SLL45/15 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: 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: 215 C Α В D Е FX 31.63 12.56 26.98 19.53 7.44 1.86 Provides: doc. Marián Milčák, PhD.

Date of last modification: 13.09.2023

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Slovak Literature and Slovak Literature KSSFaK/SLb/22 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: 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 C Α В D Е FX 28.57 16.67 14.29 11.9 11.9 16.67 **Provides:** Date of last modification: 24.02.2025 Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Slovak Literature for Children and Youth KSSFaK/SLDM/22 Course type, scope and the method: **Course type:** Lecture / Seminar Recommended course-load (hours): Per week: 1 / 1 Per study period: 14 / 14 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: 95

A	В	С	D	Е	FX
62.11	29.47	5.26	1.05	1.05	1.05

Provides: doc. Mgr. Markéta Andričíková, PhD.

Date of last modification: 25.02.2025

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Slovak Literature of Classicism and Romanticism KSSFaK/SLKR/15 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: Learning outcomes: Brief outline of the course: Recommended literature:** 

**Notes:** 

Course assessment

Course language:

Total number of assessed students: 288

A	В	С	D	Е	FX
8.33	30.21	24.65	13.89	19.1	3.82

Provides: prof. Mgr. Ján Sabol, PhD., ArtD.

Date of last modification: 19.04.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: Course

Course name: Slovak Literature of Realism and Modernism

KSSFaK/SLRaM/15

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: 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: 294

A	В	С	D	Е	FX
8.84	10.54	15.31	16.67	19.39	29.25

Provides: doc. PaedDr. Ivica Hajdučeková, PhD.

Date of last modification: 07.03.2025

University: P. J. Šafárik University in Košice					
Faculty: Faculty of A	rts				
Course ID: KPO/ SPKVV/15	Course name: Social and Political Context of Education				
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	re rse-load (hours): dy period: 28				
Number of ECTS cr	edits: 2				
Recommended seme	ster/trimester of the course: 4., 6.				
Course level: I.					
Prerequisities:					
Conditions for cours Evaluation of the dev A 100,00% - 91,00 B 90,99% - 81,00% C 80,99% - 71,00% D 70,99% - 61,00% E 60,99% - 51,00% FX 50,99% and les	reloped assignment. 0% 6 6 6 6				
Learning outcomes:  The aim and purpose of teaching the subject is to impart knowledge and promote reflection on the issues of education and training in the context of social and political change.  Development of knowledge: the student will be able to know the current theoretical background related to the process of education and training in a modern democratic society.  The student will be able to navigate the social and political space - politically, legally, socially and culturally. He/she will be able to look for alternatives and solutions to dysfunctions, while at the same time exploiting opportunities and ways to implement them.					
Brief outline of the course:  The status, role and functions of education in human life and society. The political, social and economic objectives of education. Education, learning and social change in the context of globalisation. Macrosocial determinants of education. Current roles of education and training in modern performance and democratic society.					
Course language: Slovak					
Notes:					

Course assessment					
Total number of assessed students: 210					
Α	В	С	D	Е	FX
60.48	21.43	10.95	4.29	1.43	1.43

**Provides:** Mgr. Ján Ruman, PhD.

**Date of last modification:** 13.04.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: ÚINF/ | Course name: Software engineering

SWI1a/15

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

## **Conditions for course completion:**

The evaluation will be given on the basis of the proper fulfilment of the partial tasks of solving the (group) project during the semester. The minimum prerequisite for passing the subject is obtaining 50% of the total possible number of points. The sub-probation conditions for evaluation are published in the AIS.

## **Learning outcomes:**

By completing the subject, the student:

- acquires basic knowledge of the principles and methods of software engineering,
- get familiar with the individual stages of the software development life cycle,
- familiarizes himself with the modeling of software systems and acquires basic knowledge from the use of relevant SW tools,
- will gain basic experience in working in a team and with project management and presentation.

## **Brief outline of the course:**

- 1. Introduction to software engineering.
- 2. Software processes
- 3. Selected support tools for managing software processes.
- 4. Requirements engineering.
- 5. Agile methods.
- 6. Modeling of systems.
- 7. Implementation of software systems.
- 8. Architectures of software systems.
- 9. Testing.
- 10. Evolution of systems.
- 11. Case studies of software systems.

#### **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, 2015.

## Course language:

# Slovak or English

# **Notes:**

Content prerequisities: Database systems, OOP

# **Course assessment**

Total number of assessed students: 372

A	В	С	D	Е	FX
19.09	24.46	19.62	16.94	18.55	1.34

Provides: prof. RNDr. Gabriel Semanišin, PhD., RNDr. Dávid Varga

**Date of last modification: 25.07.2022** 

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Special seminar to bachelor thesis

SZPa/22

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:** 5.

Course level: I.

## **Prerequisities:**

## **Conditions for course completion:**

Update of the bachelor thesis website. Presentation of the current state of knowledge for the topic selected in the bachelor's thesis. Presentation of the first results of bachelor thesis. Preparing of scientific article of 5 pages length in the required structure. Approval of the article by the thesis supervisor.

## **Learning outcomes:**

Basic knowledge about the procedure and writing of the bachelor's thesis, standards and formal aspects of the bachelor's thesis, the creation of bibliographic references and their citations, tools for creating the database of used literature. Basic knowledge of the content and form of presentation of the current state of knowledge for the topic of the bachelor's thesis. Basic knowledge about the preparation of a scientific article.

### Brief outline of the course:

- 1. Procedure for writing the bachelor thesis.
- 2. Standards and formal aspects of the bachelor thesis.
- 3. Rules of writing and editing documents STN 01 6910.
- 4. Documentation, Numbering of sections and subsections of written documents STN ISO 2145.
- 5. Information and documentation STN ISO 690.
- 6. Instructions for creating bibliographic references to information sources and their citation.
- 7. Selected typographic principles.
- 8. Professional resources on the Internet.
- 9. Principles of correct citation.
- 10. Tools for creating your own database of used literature.
- 11. Annotation of read literature, creation of searches.
- 12. Presentation of selected topics of bachelor theses.
- 13. Presentation of selected topics of bachelor 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, Dušan. 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: 195

abs	n	neabs		
98.97	1.03	0.0		

Provides: RNDr. Miroslav Opiela, PhD., RNDr. Dávid Varga

Date of last modification: 08.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Special seminar to bachelor thesis

SZPb/22

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: 6.

Course level: I.

**Prerequisities:** 

### **Conditions for course completion:**

Update of the bachelor thesis website. Presentation of the obtained results of the bachelor's thesis. Preparation of at least a 10-page scientific article for the topic chosen in the bachelor's thesis in the required structure and its approval by the thesis supervisor. Creating a promotional image (poster) about the results of the bachelor's thesis.

### **Learning outcomes:**

Basic knowledge of the central register of final theses, licenses and copyrights, content and form of presentation of the overall results achieved in the bachelor's thesis. Basic knowledge about the preparation of a scientific article and presentation of the achieved results for popularization purposes.

#### **Brief outline of the course:**

- 1. Central register of final theses.
- 2. Licenses and Copyrights.
- 3. Directive on basic requirements for final theses at UPJŠ in Košice.
- 4. The most common mistakes in writing a final thesis.
- 5. Evaluation criteria and examples of assessments.
- 6. Preparation of a presentation for the defense of the final thesis.
- 7. Preparation of a scientific article.
- 8. Preparation of a presentation for the defense of the final thesis.
- 9. Preparation of a scientific article.
- 10. Procedure for submitting the final thesis.
- 11. Popularization of bachelor thesis results.
- 12. Presentations of the results of bachelor theses.
- 13. Presentations of bachelor thesis results.

#### **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, Dušan. 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: 196

abs	n	neabs
97.96	2.04	0.0

Provides: RNDr. Miroslav Opiela, PhD., RNDr. Dávid Varga

Date of last modification: 08.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

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

TVa/11

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., 3., 5.

Course level: I., II., P

**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:

The Institute of physical education and sport at the Pavol Jozef Šafárik University offers 20 sports activities aerobics; aikido, basketball, badminton, body-balance, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, fitness, indoor football, SM system, step aerobics, table tennis, chess, volleyball, tabata, cycling.

Additionally, the Institute of physical education and sport at the Pavol Jozef Šafárik University offers winter courses (ski course, survival) and summer courses (aerobics by the sea, rafting on the Tisza River) with an attractive programme, sports competitions with national and international participation.

#### Recommended literature:

BENCE, M. et al. 2005. Plávanie. Banská Bystrica: FHV UMB. 198s. ISBN 80-8083-140-8. [online] Dostupné na: https://www.ff.umb.sk/app/cmsFile.php?disposition=a&ID=571 BUZKOVÁ, K. 2006. Fitness jóga, harmonické cvičení těla I duše. Praha: Grada. ISBN 8024715252.

JARKOVSKÁ, H, JARKOVSKÁ, M. 2005. Posilování s vlastním tělem 417 krát jinak. Praha: Grada. ISBN 9788024757308.

KAČÁNI, L. 2002. Futbal:Tréning hrou. Bratislava: Peter Mačura – PEEM. 278s. ISBN 8089197027.

KRESTA, J. 2009. Futsal. Praha: Grada Publishing, a.s. 112s. ISBN 9788024725345.

LAWRENCE, G. 2019. Power jóga nejen pro sportovce. Brno: CPress. ISBN 9788026427902.

SNER, Wolfgang. 2004. Posilování ve fitness. České Budějovice: Kopp. ISBN 8072322141.

STACKEOVÁ, D. 2014. Fitness programy z pohledu kinantropologie. Praha: Galén. ISBN 9788074921155.

VOMÁČKO, S. BOŠTÍKOVÁ, S. 2003. Lezení na umělých stěnách. Praha: Grada. 129s. ISBN 8024721743.

### Course language:

Slovak language

#### **Notes:**

#### Course assessment

Total number of assessed students: 15781

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
85.74	0.06	0.0	0.0	0.0	0.04	9.0	5.15

**Provides:** Mgr. Patrik Berta, Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Tomková, PhD., Mgr. Marcel Čurgali, Mgr. Alena Buková, PhD., univerzitná docentka, doc. PaedDr. Ivan Uher, MPH, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Zuzana Küchelová, PhD., Mgr. Ferdinand Salonna, PhD., Mgr. Július Evelley

Date of last modification: 07.02.2024

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

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

TVb/11

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: 2., 4., 6.

Course level: I., II., P

**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:**

Brief outline of the course:

The Institute of physical education and sport at the Pavol Jozef Šafárik University offers 20 sports activities aerobics; aikido, basketball, badminton, body-balance, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, fitness, indoor football, SM system, step aerobics, table tennis, chess, volleyball, tabata, cycling.

Additionally, the Institute of physical education and sport at the Pavol Jozef Šafárik University offers winter courses (ski course, survival) and summer courses (aerobics by the sea, rafting on the Tisza River) with an attractive programme, sports competitions with national and international participation.

### **Recommended literature:**

BENCE, M. et al. 2005. Plávanie. Banská Bystrica: FHV UMB. 198s. ISBN 80-8083-140-8. [online] Dostupné na: https://www.ff.umb.sk/app/cmsFile.php?disposition=a&ID=571 BUZKOVÁ, K. 2006. Fitness jóga, harmonické cvičení těla I duše. Praha: Grada. ISBN 8024715252.

JARKOVSKÁ, H, JARKOVSKÁ, M. 2005. Posilování s vlastním tělem 417 krát jinak. Praha: Grada. ISBN 9788024757308.

KAČÁNI, L. 2002. Futbal:Tréning hrou. Bratislava: Peter Mačura – PEEM. 278s. ISBN 8089197027.

KRESTA, J. 2009. Futsal.Praha: Grada Publishing, a.s. 112s. ISBN 9788024725345.

LAWRENCE, G. 2019. Power jóga nejen pro sportovce. Brno: CPress. ISBN 9788026427902.

SNER, Wolfgang. 2004. Posilování ve fitness. České Budějovice: Kopp. ISBN 8072322141.

STACKEOVÁ, D. 2014. Fitness programy z pohledu kinantropologie. Praha: Galén. ISBN 9788074921155.

VOMÁČKO, S. BOŠTÍKOVÁ, S. 2003. Lezení na umělých stěnách. Praha: Grada. 129s. ISBN 8024721743.

### Course language:

Slovak language

### **Notes:**

#### Course assessment

Total number of assessed students: 13946

abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
83.91	0.49	0.01	0.0	0.0	0.04	11.16	4.39

**Provides:** Mgr. Agata Dorota Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Marcel Čurgali, Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Mgr. Richard Melichar, Mgr. Petra Tomková, PhD., Mgr. Alena Buková, PhD., univerzitná docentka, doc. PaedDr. Ivan Uher, MPH, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Zuzana Küchelová, PhD., Mgr. Ferdinand Salonna, PhD., Mgr. Július Evelley

Date of last modification: 07.02.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Student Research Project 1 KSSFaK/SVPR1/15 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: 8  $\mathbf{C}$ Α В D Е FX 87.5 0.0 12.5 0.0 0.0 0.0 Provides: doc. Mgr. Markéta Andričíková, PhD.

Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

Date of last modification: 23.05.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Student Research Project 2 KSSFaK/SVPR2/15 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:** 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: 16  $\mathbf{C}$ Α В D Е FX 75.0 25.0 0.0 0.0 0.0 0.0 Provides: doc. Mgr. Markéta Andričíková, PhD.

Date of last modification: 23.05.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: ÚINF/ | Course name: Student scientific conference

SVK1/15

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: 4., 6.

Course level: I.

**Prerequisities:** 

### **Conditions for course completion:**

It is required to be registered for the participation on the Student Scientific Conference (ŠVK) in accordance to the Statute of the Student Scientific Conference at PF UPJŠ and the specific conditions for participation in a given year, which are announced by the dean of the faculty. Within one year of the ŠVK, a student or a research team can register in one track only. It is also possible to apply with a written work that is an integral part of a bachelor's or master's thesis or a result of a student support program. The written work at ŠVK is the result of the student's own work or the work of the research team. It must not show elements of academic fraud and must meet the criteria of good research practice defined in the Rector's Decision no. 21/2021, which lays down the rules for assessing plagiarism at Pavol Jozef Šafárik University in Košice and its components. Fulfillment of the criteria is verified mainly in the process of supervision and in the process of work presentation. Failure to do so is reason for disciplinary action. The condition for the evaluation is a successful presentation and defense of the work in the relevant track headed by a commission appointed by the dean of the faculty. The commission decides on the eligibility of credits and states its decision in the memorandum of the ŠVK.

# **Learning outcomes:**

The student demonstrates mastery of extended theory and professional terminology of the field of study, acquisition of knowledge, skills and competences, the ability to apply them creatively in solving selected field problems, ability to present the results using appropriate presentation methods and tools and ability to actively participate in a professional discussion.

### **Brief outline of the course:**

- 1. Analysis of the state of the art in the field.
- 2. Design and implementation of a solution to the researched problem.
- 3. Evaluation of achieved results.
- 4. Preparation of work annotation.
- 5. Processing the written work.
- 6. Preparation of results presentation.
- 7. Presentation and defense of the obtained results.

**Recommended literature:** 

The recommended literature is specified individually by the student or research team in agreement with the consultant or the supervisor.

# Course language:

Slovak or english

**Notes:** 

# **Course assessment**

Total number of assessed students: 182

A	В	С	D	Е	FX
100.0	0.0	0.0	0.0	0.0	0.0

**Provides:** 

Date of last modification: 25.01.2022

University: P. J. Šafárik University in Košice

**Faculty:** Faculty of Arts

Course ID: ÚFV/ | Course name: Students` Digital Literacy

DGS/21

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:**

Summary evaluation based on ongoing assessment:

- 1. Practical ongoing assignments and their defense (at least 50% needed)
- 3. Active participation during face-to-face contact learning in classical or virtual classroom (3 absences allowed) and during online learning (no absence, uploading all individual ongoing assignments)

### **Learning outcomes:**

The student should obtain and know to apply basic knowledge and skills in working with current digital technologies (mobile phone, tablet, laptop, web technologies):

- 1. according to the current European framework for the Digital competence DigComp and ECDL
- 2. for better and more effective learning, work and active life in higher education, later lifelong learning and further career prospects.

### **Brief outline of the course:**

- 01.-02. Basic digital skills, DigComp framework, ECDL
- modern web browser and its personalization
- security, privacy, responsible use of DT
- 03.-05. Search, collection and evaluation of digital content
- scanning, audio recording and speech resolution, optical resolution (OCR)
- digital notebooks (Google keep, Evernote, Onenote)
- evaluation of digital resources (Google forms and sections)

06.-08. Editing and creating digital content

- cloud and interactive documents

(text and spreadsheet editors - Google, Microsoft, Jupyter)

- work with pdf documents, e-books and videos

(Kami, Google books, Screencasting)

09. - 10. Organization, protection and sharing of digital content

- modern LMS and cloud storage

(Google Classroom, Microsoft team, Google Drive, Dropbox)

- time management (Google Calendar)

11.-13. Digital communication and cooperation

- collaborative interactive whiteboards (Jamboard, Whiteboard)
- online presentations and online meetings (Google presentations, Powerpoint, Google meet, Microsoft teams)

#### **Recommended literature:**

- 1. Carretero Gomez, S., Vuorikari, R. and Punie, Y., DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use, Luxembourg, 2017, ISBN 978-92-79-68006-9, https://www.ecdl.sk/
- 2. Bruff, D. (2019). Intentional Tech: Principles to Guide the Use of Educational Technology in College Teaching (1st edition). Morgantown: West Virginia University Press.
- 3. Baker, Y. (2020). Microsoft Teams for Education. Amazon Digital Services.
- 4. Miller, H. (2021). Google Classroom + Google Apps: 2021 Edition. Brentford: Orion Edition Limited.

### Course language:

slovak

#### **Notes:**

#### Course assessment

Total number of assessed students: 245

A	В	С	D	Е	FX
76.33	5.31	2.86	0.0	14.69	0.82

Provides: doc. RNDr. Jozef Hanč, PhD.

Date of last modification: 26.01.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

Course ID: ÚTVŠ/ | Course name: Summer Course-Rafting of TISA River

LKSp/13

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: 2., 4., 6.

Course level: I., II., P

### **Prerequisities:**

### **Conditions for course completion:**

Completion: passed

Condition for successful course completion:

- active participation in line with the study rule of procedure and course guidelines
- effective performance of all tasks: carrying a canoe, entering and exiting a canoe, righting a canoe, paddling

## **Learning outcomes:**

Content standard:

The student demonstrates relevant knowledge and skills in the field, which content is defined in the course syllabus and recommended literature.

Performance standard:

Upon completion of the course students are able to meet the performance standard and:

- implement the acquired knowledge in different situations and practice,
- implement basic skills to manipulate a canoe on a waterway,
- determine the right spot for camping,
- prepare a suitable material and equipment for camping.

#### **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:**

1. JUNGER, J. et al. Turistika a športy v prírode. Prešov: FHPV PU v Prešove. 2002. ISBN 8080680973.

Internetové zdroje:

1. STEJSKAL, T. Vodná turistika. Prešov: PU v Prešove. 1999.

Dostupné na: https://ulozto.sk/tamhle/UkyxQ2lYF8qh/name/Nahrane-7-5-2021-v-14-46-39#! ZGDjBGR2AQtkAzVkAzLkLJWuLwWxZ2ukBRLjnGqSomICMmOyZN==

### Course language:

Slovak language

### **Notes:**

### **Course assessment**

Total number of assessed students: 232

abs	n
36.64	63.36

Provides: Mgr. Dávid Kaško, PhD.

Date of last modification: 29.03.2022

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚTVŠ/ | **Course name:** Survival Course

KP/12

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: 2., 4., 6.

Course level: I., II., P

**Prerequisities:** 

### **Conditions for course completion:**

Completion: passed

Condition for successful course completion:

- active participation in line with the study rule of procedure and course guidelines,
- effective performance of all the tasks defined in the course syllabus

### **Learning outcomes:**

Content standard:

The student demonstrates relevant knowledge and skills in the field, which content is defined in the course syllabus and recommended literature.

Performance standard:

Upon completion of the course students are able to meet the performance standard and should:

- acquire knowledge about safe stay and movement in natural environment,
- obtain theoretical knowledge and practical skills to solve extraordinary and demanding situations connected with survival and minimization of damage to health,
- be able to resist and face situations related to overcoming barriers and obstacles in natural environment,
- be able implement the acquired knowledge as an instructor during summer sport camps for children and youth within recreational sport.

### **Brief outline of the course:**

Brief outline of the course:

- 1. Principles of conduct and safety in the movement in unfamiliar natural environment
- 2. Preparation and guidance of a hike tour
- 3. Objective and subjective danger in the mountains
- 4. Principles of hygiene and prevention of damage to health in extreme conditions
- 5. Fire building
- 6. Movement in the unfamiliar terrain, orientation and navigation
- 7. Shelters
- 8. Food preparation and water filtering
- 9. Rappelling, Tyrolian traverse
- 10. Transport of an injured person, first aid

### **Recommended literature:**

- 1. JUNGER, J. et al. Turistika a športy v prírode. Prešov: Fakulta humanitných a prírodných vied PU v Prešove. 2002. 267s. ISBN 80-8068-097-3.
- 2. PAVLÍČEK, J. Člověk v drsné přírodě. 3. vyd. Praha: Práh. 2002. ISBN 8072520598.
- 3. WISEMAN, J. SAS: příručka jak přežít. Praha: Svojtka & Co. 2004. 566s. ISBN 8072372807.

# Course language:

Slovak language

#### **Notes:**

### **Course assessment**

Total number of assessed students: 466

abs	n
46.78	53.22

Provides: Mgr. Ladislav Kručanica, PhD.

Date of last modification: 16.05.2023

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of A	arts
Course ID: ÚINF/ SLO1a/15	Course name: Symbolic logic
Course method: pre	re / Practice rse-load (hours): study period: 28 / 14 esent
Number of ECTS cr	edits: 5
Recommended seme	ster/trimester of the course: 6.
Course level: I.	
Prerequisities:	
Conditions for cours Knowledge of studied	d notions will be evaluated.
Learning outcomes: To understand basic i	notions of symbolic logic.
Brief outline of the control of the	bols  n ation models ons sic proving system I connections
Recommended litera	
2. Goldstern M., Juda	es.upjs.sk/~krajci/skola/vyucba/ucebneTexty/logika-stromy.pdf ah H.: The Incompleteness Phenomenon, A New Course in Mathematical //ellesley, Massachusetts, 1995
Course language:	
Slovak	
Notes:	

Course assessment							
Total number of assessed students: 447							
A	В	С	D	Е	FX		
29.31	10.96	11.86	10.51	25.06	12.3		

**Provides:** prof. RNDr. Stanislav Krajči, PhD.

**Date of last modification:** 04.01.2022

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ Course name: Teachers' Support Groups **SSU/15** 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., 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: 89 C Α В D Е FX 87.64 6.74 4 49 0.0 0.0 1.12 Provides: doc. PaedDr. Renáta Orosová, PhD.

Date of last modification: 12.03.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID:** Course name: Team Work KPPaPZ/TIMPR/25 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: 4** Recommended semester/trimester of the course: 4., 6. Course level: I., P **Prerequisities: Conditions for course completion: Learning outcomes: Brief outline of the course: Recommended literature:** Course language: **Notes:** Course assessment Total number of assessed students: 0  $\mathbf{C}$ Α В D Е FX 0.0 0.0 0.0 0.0 0.0 0.0 Provides: PhDr. Anna Janovská, PhD. Date of last modification: 04.02.2025 Approved: doc. PaedDr. Ivica Hajdučeková, PhD., prof. RNDr. Stanislav Krajči, PhD.

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts Course ID: KPE/ **Course name:** Theory of Education TVE/08 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: 722 C Α В D Е FX 45.98 29.64 15.93 4.85 1.8 1.8 Provides: Mgr. Beáta Sakalová, PhD., Mgr. Zuzana Vagaská, PhD.

Date of last modification: 12.03.2024

University: P. J. Šafárik University in Košice Faculty: Faculty of Arts **Course ID: Course name:** Theory of Literature 1 KSSFaK/TELI/15 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:** 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: 336

A	В	С	D	Е	FX
19.05	19.05	25.0	14.58	18.15	4.17

Provides: prof. PhDr. Marián Andričík, PhD.

Date of last modification: 11.02.2025

University: P. J. Šafárik University in Košice

Faculty: Faculty of Arts

**Course ID:** ÚINF/ | **Course name:** Typographical systems

TYS1/15

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., N

**Prerequisities:** 

### **Conditions for course completion:**

Satisfiable ability to correct mainly mathematical typesetting.

### **Learning outcomes:**

To provide the basic information on principles for typesetting of documents containing mathematical formulas.

#### **Brief outline of the course:**

- 1. Principles for typesetting of documents containing mathematical formulas.
- 2. Typesetting of a plain text, special text symbols, using of text fonts.3
- 3. TeX macros.
- 4. Enumerations in text and footnote command. Parameter setting determining the appearance of the pages.
- 5. Typesetting of mathematical formulas in text and displays, aligning formulas.
- 6. Making tables and pictures.
- 7. Definitions, theorems, and proofs in a mathematical document.
- 8. Contents, bibliography, sections in a document.
- 9. Pictures.
- 10.-12. Project.

#### **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.

**Notes:** 

#### **Course assessment**

Total number of assessed students: 267

A	В	С	D	Е	FX	
50.56	16.85	19.48	5.99	6.37	0.75	

Provides: prof. RNDr. Stanislav Krajči, PhD.

Date of last modification: 08.01.2022