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COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPMS/10	Course name: Advanced statistical methods
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course: 2., 4.	
Course level: III.	
Prerequisites:	
Conditions for course completion: Exam or public lecture.	
Learning outcomes: Understanding the current state of the research area.	
Brief outline of the course: Study of journal articles and scientific monographs according to specific research direction of students.	
Recommended literature: Recent journal literature.	
Course language: Slovak and English	
Notes:	
Course assessment Total number of assessed students: 6	
N	P
0.0	100.0
Provides: prof. RNDr. Ivan Žežula, CSc.	
Date of last modification: 28.03.2022	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ ZSUD/22	Course name: Basics of machine learning
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: 7	
Recommended semester/trimester of the course: 1., 3.	
Course level: III.	
Prerequisites:	
Conditions for course completion: Creating a project focused on the application of machine learning algorithms in a selected application domain. Continuous written work focused on the preparation, processing and interpretation of data using machine learning methods. Successful completion of an oral exam focused on selected machine learning methods.	
Learning outcomes: Theoretical knowledge in the area of machine learning. Basic concepts of machine learning. Basic machine learning algorithms.	
Brief outline of the course: 1. Basic concepts of machine learning, basic characteristics of data, types of attributes, characteristics for individual attributes, dependence between attributes. 2. Data sources and their acquisition. Determining the target task, preparation and cleaning of data, missing values, incorrect inputs. 3. Classification tasks, selected classification methods, evaluation of models, classification accuracy indicators. 4. Cluster analysis. Association rules. 5. Prediction tasks and selected prediction methods, prediction accuracy indicators.	
Recommended literature: 1. AGGARWAL, Charu C. Data mining: a textbook. Cham: Springer, 2015. ISBN 978-3-319-14141-1. 2. ALPAYDIN, Ethem. Introduction to machine learning. 3rd ed. Massachusetts: MIT Press, 2014. ISBN 978-0-262-02818-9. 3. RASCHKA, Sebastian, Mirjalili, Vahid. Python Machine Learning: Machine Learning and Deep Learning with Python, scikit-learn, and TensorFlow 2, 3rd Edition, Packt Publishing Ltd., 2019. ISBN 978-1789955750.	
Course language:	
Notes:	

Course assessment	
Total number of assessed students: 2	
N	P
0.0	100.0
Provides: doc. RNDr. Ľubomír Antoni, PhD.	
Date of last modification: 01.10.2021	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dCOK/24	Course name: Certified training course
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: III.	
Prerequisites:	
Conditions for course completion: Completion of a certified professional/training course.	
Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capabilities of scientific work and familiarizes himself with the methodologies of making scientific knowledge available. He confronts his own knowledge and skills with other course participants, develops the abilities of peer discussion in the given scientific field.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dCDC/22	Course name: Citation in Slovak scientific journal
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: III.	
Prerequisites:	
Conditions for course completion: Citation in a national scientific journal	
Learning outcomes: Obtaining a citation demonstrates broad and very well-founded scientific knowledge in the researched field, based on the ability to formulate research questions, to reflect on a scientific problem in such a way that generates new knowledge. At the same time, a citation in an indexed source demonstrates the competence to communicate new knowledge, which is a significant contribution to scientific knowledge, at the highest expert level.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 08.11.2022	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dCZC/22	Course name: Citation in international scientific journal
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: III.	
Prerequisites:	
Conditions for course completion: Obtained citation in a foreign scientific journal.	
Learning outcomes: Obtaining a citation demonstrates broad and very well-founded scientific knowledge in the researched field, based on the ability to formulate research questions, to reflect on a scientific problem in such a way that generates new knowledge. At the same time, a citation in an indexed source demonstrates the competence to communicate new knowledge, which is a significant contribution to scientific knowledge, at the highest expert level	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 08.11.2022	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dCMG/22	Course name: Citation in monograph
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Obtained citation registered in SCI or Scopus.	
Learning outcomes: Obtaining a citation demonstrates broad and very well-founded scientific knowledge in the researched field, based on the ability to formulate research questions, to reflect on a scientific problem in such a way that generates new knowledge. At the same time, a citation in an indexed source demonstrates the competence to communicate new knowledge, which is a significant contribution to scientific knowledge, at the highest expert level.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 08.11.2022	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dSPA/24	Course name: Co-investigator of applied research project
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Co-investigator of the applied research project	
Learning outcomes: The PhD student demonstrates the ability to participate in teamwork, to bring his own contribution to the solution of the project objective of applied research and to take responsibility for assigned tasks. By solving an applied research project, he acquires the ability to implement the project objective according to the established procedure, to follow the project schedule, to coordinate his own activities with colleagues, to participate in the creation of applied research outputs. The PhD student gains valuable experience from the practical course of a grant project with a focus on applied research	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dSVG/24	Course name: Co-investigator of internal grant (VVGS)
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Co-worker of project supported by internal grant schemes (VVGS)	
Learning outcomes: The PhD student demonstrates the ability to participate in teamwork, to bring his own contribution to the solution of the project objective within the internal grant system at UPJŠ. By solving the internal VVGS grant, he acquires the ability to implement the project plan according to the established procedure, adhere to the project schedule, coordinate his own activities with colleagues, and participate in the creation of outputs. The PhD student gains valuable experience from the practical course of the grant project.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dSMP/22	Course name: Co-investigator of international project
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 15	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Membership in the research team of an international project.	
Learning outcomes: Active involvement by solving a specific task within a team of international project solvers. The PhD student demonstrates the ability to work in a team, take responsibility for the assigned task, adhere to the time schedule and fulfill the project outputs. The PhD student gains personal experience from the implementation of an international project, participation in its key stages, creation of measurable outputs, grant funding of science.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 2	
abs	n
100.0	0.0
Provides:	
Date of last modification: 08.11.2022	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dSDP/24	Course name: Co-investigator of national project
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Co-investigator of the domestic project	
Learning outcomes: The PhD student demonstrates the ability to participate in teamwork, to bring his own contribution to the solution of the project objective and to take responsibility for the assigned tasks. By solving the domestic project, he acquires the ability to implement the project intention according to the established procedure, to follow the project schedule, to coordinate his own activities with colleagues, to participate in the creation of outputs. The PhD student gains valuable experience from the practical course of the grant project.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 1	
abs	n
100.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ VYMD/15	Course name: Computational complexity and models
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: 9	
Recommended semester/trimester of the course: 1., 3.	
Course level: III.	
Prerequisites:	
Conditions for course completion: Written test combined with an oral examination.	
Learning outcomes: Providing an extended background in the area of efficient computations, computational complexity of algorithms, fundamental time and space complexity classes, hardest complete problems, and about reducibility among problems.	
Brief outline of the course: <ol style="list-style-type: none"> 1. Measuring time and space complexity, basic computational models: single- and multi-tape Turing machines, RAM and RASP models, unit and logarithmic costs. 2. Basic complexity classes: L, NL, P, NP, PSPACE, NPSPACE, EXPTIME, NEXPTIME, EXPSPACE. 3. P versus NP, L versus NL. Examples of complete problems in these classes. 4. Polynomial time and logarithmic space reducibilities, definition and basic properties of complete problems. 5. NP-completeness of the Boolean formula satisfiability (SAT). 6. Variants of SAT, problems related to graph coloring. 7. Other NP-complete problems: vertex cover, Hamiltonian paths, subset sum, balancing, traveling salesman problem. 8. Subexponential deterministic solutions for selected NP-complete problems: planar 3-colorability, balancing. Restricted variants with more efficient solutions. 9. Space complexity classes: Savitch theorem, inductive counting. 10. Problems complete for NL, P, and PSPACE: graph accessibility (GAP), circuit-value, quantified Boolean formulas (QBF). 11. Hierarchy and translation theorems for time and space. 12. Relativized complexity classes. 13. Alternating complexity classes. 14. Polynomial time hierarchy. 15. Alternating logarithmic space hierarchy. 	
Recommended literature:	

<p>J.E. Hopcroft, R.Motwani, J.D. Ullman: Introduction to automata theory, languages, and computation, Addison-Wesley, 2007.</p> <p>M. Sipser: Introduction to the Theory of Computation, Thomson, 2nd edition, 2006.</p> <p>S. Arora, B. Barak: Computational Complexity: A Modern Approach, Cambridge Univ. Press, 2009.</p> <p>C. Calude and J. Hromkovič: Complexity: A Language-Theoretic Point of View, in G. Rozenberg and A. Salomaa, Handbook of Formal Languages II, Springer, 1997.</p> <p>G.Brassard, P.Bradley: Fundamentals of algorithmics, Prentice Hall, 1996.</p> <p>Ch. H. Papadimitriou: Computational Complexity, Addison-Wesley, 1994.</p> <p>D.P.Bovet, P.Crescenzi: Introduction to the theory of complexity, Prentice Hall, 1994.</p>					
<p>Course language: Slovak or english</p>					
<p>Notes: Content prerequisite: Basic knowlegde in the area of formal languages, automata theory, and programming.</p>					
<p>Course assessment Total number of assessed students: 30</p> <table> <tr> <th>N</th><th>P</th></tr> <tr> <td>0.0</td><td>100.0</td></tr> </table>		N	P	0.0	100.0
N	P				
0.0	100.0				
<p>Provides: prof. RNDr. Viliam Geffert, DrSc.</p>					
<p>Date of last modification: 23.11.2021</p>					
<p>Approved: prof. RNDr. Katarína Cechlárová, DrSc.</p>					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dDIR/14	Course name: Differential and integral equations
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course: 1., 3.	
Course level: III.	
Prerequisites:	
Conditions for course completion: Overall evaluation is given by written and oral part of the exam.	
Learning outcomes: Understanding of the basic rigorous ideas of differential and integral equations and their applications.	
Brief outline of the course: Boundary Value Problems and Sturm–Liouville Theory. Green’s Functions. Self-adjoint Problems. Nonhomogeneous Boundary Value Problems. Nonlinear Differential Equations and Stability. Volterra Integral Equations. The Fredholm Alternative. Degenerate Operators and Kernels.	
Recommended literature: M. Greguš, M. Švec, V. Šeda: Obyčejné diferenciální rovnice, Bratislava 1985. V. V. Stepanov: Kurs diferenciálních rovnic, Praha, 1950. M. Švec: Integrální rovnice, Bratislava, 1983. W. E. Boyce, R. C. DiPrima: Elementary Differential Equations and Boundary Value Problems, John Wiley & Sons, Inc. 2001. R. Kress: Linear Integral Equations, Springer, 2014.	
Course language: Slovak and English	
Notes: Basic knowledge of functional analysis is required.	
Course assessment Total number of assessed students: 3	
N	P
0.0	100.0
Provides: doc. Mgr. Jozef Kiseľák, PhD.	
Date of last modification: 14.04.2022	

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dDME/10	Course name: Discrete models of mathematical economics
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course: 1., 3.	
Course level: III.	
Prerequisites:	
Conditions for course completion: Active study of journal publications, solving exercises, ability to formulate and analyze algorithms.	
Learning outcomes: Knowledge of approaches to modelling fairness in resource division. Ability to formulate algorithms and analyze their properties.	
Brief outline of the course: The cake cutting problem. Fairness criteria and their relations. Algorithms for proportional division. Division into unequal parts, Ramsey partitions. Algorithms for envy-free division. Lower bounds for numbers of cuts. Impossibility results. Approximate algorithms.	
Recommended literature: 1. J. Robertson, W. Web: Cake-cutting algorithms, A.K. Peters, 1998 2. S. Brams, A.D. Taylor: Fair Division, Cambridge University Press, 1996	
Course language: Slovak and English	
Notes:	
Course assessment Total number of assessed students: 8	
N	P
0.0	100.0
Provides: prof. RNDr. Katarína Cechlárová, DrSc.	
Date of last modification: 26.01.2022	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dDZS/24	Course name: Dissertation exam
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 20	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Obtaining the required number of credits in the prescribed composition according to the UPJŠ study regulations, preparation and defense of the thesis, successfully completed dissertation examination.	
Learning outcomes: The PhD student demonstrated the prerequisites for successful continuation of the study by fulfilling the conditions prescribed by the study regulations for the study and scientific part of the doctoral study related to the topic of the dissertation.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 38	
N	P
0.0	100.0
Provides:	
Date of last modification: 08.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dVOP/24	Course name: Elaboration of reviewer report
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 3	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Elaboration of reviewer report	
Learning outcomes: The PhD student demonstrates broad and scientifically based knowledge in the field of study, as well as knowledge of a wide range of methods and approaches. Demonstrates the ability to critically assess a professional problem and its proposed solution, as well as to evaluate it and possibly recommend another solution. He applies knowledge and skills from the field of pedagogical sciences to his own field.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 1	
abs	n
100.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dFAN/10	Course name: Functional analysis
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: 8	
Recommended semester/trimester of the course: 2., 4.	
Course level: III.	
Prerequisites:	
Conditions for course completion: An exam consisting of demonstrating basic knowledge of function spaces and their applications in solving differential and integral equations.	
Learning outcomes: Understanding the basic methods of Applied Functional Analysis, the principles of mathematical analysis in infinite-dimensional spaces with an emphasis on the completeness of function spaces within which differential and integral equations are solved.	
Brief outline of the course: Linear spaces. Algebraic base and dimension. Linear operators and functionals. Algebraic dual spaces. Linear topological space. Locally convex space. Normed space. $L(p)$ spaces. Dual spaces of $L(p)$ spaces. Hilbert space. Applications of Baire category theorem. Open mapping theorem. Closed graph theorem. Hahn-Banach theorem. Spectrum of linear compact operator. Lebesgue spaces, Sobolov spaces and their use in solving differential and integral equations.	
Recommended literature: Bryan P. Rynne and Martin A. Youngson: Linear Functional Analysis, 2008. Kōsaku Yosida: Functional Analysis (Springer Classics in Mathematics) 6th ed. 1995.	
Course language: Slovak and English	
Notes:	
Course assessment Total number of assessed students: 16	
N	P
0.0	100.0
Provides: prof. RNDr. Jozef Doboš, CSc.	
Date of last modification: 09.01.2025	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dISLa/14	Course name: Individual study of scientific literature I
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 12	
Recommended semester/trimester of the course: 1., 2..	
Course level: III.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language: Slovak and English	
Notes:	
Course assessment Total number of assessed students: 42	
abs	n
100.0	0.0
Provides:	
Date of last modification: 03.05.2015	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dISLb/14	Course name: Individual study of scientific literature II
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 12	
Recommended semester/trimester of the course: 3., 4..	
Course level: III.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language: Slovak and English	
Notes:	
Course assessment Total number of assessed students: 41	
abs	n
100.0	0.0
Provides:	
Date of last modification: 03.05.2015	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dZSP2/24	Course name: International study stay over 30 days
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Completion of a foreign study stay lasting more than 30 days.	
Learning outcomes: By completing the study stay, the PhD student demonstrates the ability to reflect on research problems and work critically with sources at an expert level and in an interdisciplinary context, while being able to generate new knowledge. He is able to actively communicate at an expert level in more than one language. He acts as a responsible independent scientist, works independently and in a group with the aim of pushing the boundaries of knowledge and transferring them to other areas of research, to practice and to the wider public. He can competently argue and explain his ideas	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dZSP1/24	Course name: International study stay up to 30 days
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Completion of a foreign study stay lasting at most 30 days.	
Learning outcomes: By completing a shorter study stay, the PhD student demonstrates the ability to reflect on research problems and work critically with sources at an expert level and in an interdisciplinary context, while being able to generate new knowledge. He is able to actively communicate at an expert level in more than one language. He acts as a responsible independent scientist, works independently and in a group with the aim of pushing the boundaries of knowledge and transferring them to other areas of research, to practice and to the wider public. He can competently argue and explain his ideas.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 13.01.2025	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPME/14	Course name: Matching models in economics
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present	
Number of ECTS credits: 7	
Recommended semester/trimester of the course: 2., 4.	
Course level: III.	
Prerequisites:	
Conditions for course completion: The assessment is based on the ability to solve problems and on an oral exam in theory.	
Learning outcomes: The knowledge of basic assignment problems in economics and game theory and their computational analysis.	
Brief outline of the course: The problem of stable marriage. Gale-Shapley algorithm. Structure of stable matchings. The hospital-residents problem. Rural hospitals theorem. The assignment problem with couples. Maximum flow approach to assign students to two different places. The stable roommates problem and Irvings algorithm. The stable partition problem.	
Recommended literature: 1. D.Gusfield and R.W. Irving, The Stable Marriage Problem: Structure and Algorithms, MIT Press, 1989. 2. A.E. Roth and M.A.O. Sotomayor, Two-sided matching: a study in game-theoretic modeling and analysis, Econometric Society Monographs, Cambridge University Press, 1990. 3. D.F. Manlove, Algorithmics of Matching Under Preferences, World Scientific, 2013. 4. Journal publications	
Course language: Slovak and English	
Notes:	
Course assessment Total number of assessed students: 3	
N	P
0.0	100.0
Provides: prof. RNDr. Katarína Cechlárová, DrSc.	
Date of last modification: 26.01.2022	

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPOV/24	Course name: Membership in conference organising committee
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 3	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Work in the organizing committee of the conference	
Learning outcomes: By working in the organizing committee of the conference, the PhD student demonstrates the abilities and competences to organize a scientific or professional event independently or in a team, to manage the implementation in terms of time and content, to communicate effectively verbally and in writing using various technical means as needed, including in a foreign language at a professional level with various types of people, if necessary, correctly recommend solutions or make independent decisions.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dCFA/14	Course name: Methods of time-frequency analysis
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present	
Number of ECTS credits: 7	
Recommended semester/trimester of the course: 2., 4.	
Course level: III.	
Prerequisites:	
Conditions for course completion: individual oral exam	
Learning outcomes: The purpose of the course is to provide introductory knowledge in time-frequency methods of functional analysis. Present possibilities of their usage in various areas of signal processing.	
Brief outline of the course: 1. Basic notions of functional analysis: linear spaces, metrics, norm, inner product, Hilbert space, bases, linear operators and their basic properties. 2. Laplace transform and Fourier transform: definitions, basic properties, convolution, inverse Laplace and Fourier transform. 3. Window functions, short-time Fourier transform: basic properties and usage. 4. Wavelets: basic constructions, ortonormal bases, continuous wavelet transform (CWT), signal reconstruction using CWT, applications of CWT. 5. Localization operators (LO's) and time-frequency analysis: Gabor and Calderón reproducing formula, symbol of an operator, basic properties of LO's and its usage in signal processing in the time-frequency (resp. time-scale) plane.	
Recommended literature: 1. Gröchenig, K.: Foundations of Time-Frequency Analysis. Birkhäuser, Boston, 2001. 2. Führ, H.: Abstract Harmonic Analysis of Continuous Wavelet Transforms. Lecture Notes in Mathematics 1863, Springer Verlag, 2005. 3. Walker, J. S.: A Primer on Wavelets and Their Scientific Applications (Second Edition). Chapman & Hall, Boca Raton, 2008.	
Course language: Slovak and English	
Notes:	

Course assessment	
Total number of assessed students: 5	
N	P
0.0	100.0
Provides: prof. RNDr. Ondrej Hutník, PhD.	
Date of last modification: 14.04.2022	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dNMI/11	Course name: Non-additive measures and integrals
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present	
Number of ECTS credits: 7	
Recommended semester/trimester of the course: 1., 3.	
Course level: III.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes: The purpose of the course is to provide introductory knowledge in non-additive set functions, measures and integrals. Present possibilities of their usage in various areas of human knowledge.	
Brief outline of the course: Basic notions: set systems, set functions, measurable spaces, measurable mappings. Additive and σ -additive measures, Lebesgue's integral. Non-additive measures, fuzzy measures, belief and plausability, comonotone functions. Choquet and Sugeno integral and their discrete forms. Pseudo-operations, pseudo-additive integrals, applications of non-additive integrals.	
Recommended literature: 1. Denneberg, D.: Non-additive Measure and Integral. Kluwer Academic Publishers, Dordrecht, 1997. 2. Neubrunn, T. - Riečan, B.: Integral, Measure and Ordering, Kluwer Academic Publishers, Dordrecht, 1997. 3. Pap, E.: Null-additive Set Functions. Kluwer Academic Publishers, Boston-Bratislava-Dordrecht, 1995. 4. Wang, Z. - Klir, G. J.: Generalized Measure Theory. Springer, 2009.	
Course language: Slovak and English	
Notes: Student has to have a basic knowledge from measure theory and Lebesgue integral.	
Course assessment Total number of assessed students: 13	
N	P
0.0	100.0
Provides: prof. RNDr. Ondrej Hutník, PhD.	
Date of last modification: 14.04.2022	

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPE/ PgVU/17	Course name: Pedagogy for University Teachers
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: Per study period: 28s Course method: distance, present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: 1. Development of a teaching diary—100% 2. Compulsory active participation and attendance in accordance with the Study Regulations.	
Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i.e., will be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching process of university-level professional subjects. Identify and specify educational procedures of a university teacher aimed at effective teaching management, pedagogical diagnostics, and assessment of learning outcomes. Recognize different approaches to pedagogical evaluation and their impact on improving the quality of the educational process at the university level. Skills Implement effective educational methods and techniques into the teaching of professional subjects, tailored to the needs of university students. Conduct pedagogical diagnostics, assess students' progress, and apply appropriate evaluation methods to improve learning outcomes. Analyze and reflect on one's own teaching process, identify areas for improvement, and enhance the teaching of professional subjects, including the rationalization of the time and content structure of teaching. Present specific proposals for improving the teaching process, including the use of new technologies and innovative pedagogical approaches. Competencies Confidently and effectively manage the teaching of university subjects, applying educational competencies that consider the specifics of higher education. Critically reflect on one's own pedagogical practice and the learning outcomes of students to improve teaching methods and achieve a higher quality of the educational process. Apply innovative solutions to streamline and optimize the teaching process, aiming to increase the engagement and success of university students.	
Brief outline of the course: The personality of a university teacher. Teaching styles. Student in university education. Student learning styles. Possibilities of adapting teaching styles and student learning styles. University teacher–student interaction and communication in the teaching process. Pedagogical competencies	

of a university teacher. Didactic analysis of the curriculum; teaching materials and textbooks. Forms of university teaching. Methods of university teaching. Verification methods and student assessment. Creation of a didactic test. Designing university teaching process. University teacher self-reflection.

Recommended literature:

Beránek, J. (2023). Moderní pedagogické metody a přístupy. Praha: Portál.
 Fiala, M. (2023). Didaktika a metodika v současné škole. Praha: Grada Publishing.
 Kováč, M. (2023). Vzdelávanie v 21. storočí: Inovatívne prístupy a metódy. Nitra: Vydavateľstvo UKF v Nitre.
 Koudelka, J. (2023). Moderní didaktika a její aplikace. Praha: Karolinum.
 Křížová, M., & Šebová, P. (2023). Vzdělávání učitelů: Teoretické a praktické přístupy. Praha: Triton.
 Kučerová, M. (2023). Vzdělávání učitelů a profesionální rozvoj. Praha: Triton.
 Mocová, M., & Lázňovská, M. (2023). Pedagogika a jej aplikácie v praxi. Bratislava: Vydavateľstvo Spolku slovenských pedagogických pracovníkov.
 Novák, J., & Pol, M. (2024). Pedagogické výzkumy a inovace ve vzdělávání. Praha: Portál.
 Sikora, J. (2022). Didaktika a metodika vzdelávania: Nové výzvy a trendy. Bratislava: Vydavateľstvo Univerzity Komenského v Bratislave.
 Škoda, J. (2022). Efektivní výuka: Praktické strategie a metody. Praha: Grada Publishing.
 Švec, J. (2023). Didaktika a školní politika: Teorie a praxe. Praha: Grada Publishing.
 Vojtová, K. (2024). Diferenciace a inkluze ve vzdělávání. Praha: Wolters Kluwer.

Course language:

slovak

Notes:

Course assessment

Total number of assessed students: 152

abs	n	neabs
98.03	0.66	1.32

Provides: doc. PaedDr. Renáta Orosová, PhD.

Date of last modification: 14.09.2024

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dODP/24	Course name: PhD thesis defence
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 30	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 1	
N	P
0.0	100.0
Provides:	
Date of last modification: 26.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPPV/24	Course name: Popularisation of science
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Active involvement in the popularization of science.	
Learning outcomes: Demonstrated ability to present science to the lay public, use interactive methods of scientific communication, identify the target group and adapt the communication language to the level of professional knowledge. A PhD student is able to arouse interest and motivate specific target groups in the field of his scientific work, but also in the wider context of science.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPZK/24	Course name: Presentation of results at international conference
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Active participation in an international conference abroad.	
Learning outcomes: By actively participating in an international scientific conference abroad, the PhD student demonstrates a high level of ability to identify, evaluate, and apply correct scientific methods or research methodology in his scientific field. He demonstrates the ability to reflect on a specific scientific problem by using the latest approaches and applying them critically. Demonstrates competence to use existing theories and concepts in an innovative way, as well as generate new original scientific knowledge and communicate research results to a wider audience by adequate means and through a foreign language.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPZV/24	Course name: Presentation of results at international conference with low acceptance rate
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 15	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Active participation in an international conference abroad.	
Learning outcomes: By actively participating in an international scientific conference abroad, the PhD student demonstrates a high level of ability to identify, evaluate, and apply correct scientific methods or research methodology in his scientific field. He demonstrates the ability to reflect on a specific scientific problem by using the latest approaches and applying them critically. Demonstrates competence to use existing theories and concepts in an innovative way, as well as generate new original scientific knowledge and communicate research results to a wider audience by adequate means and through a foreign language.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 12.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPDK/24	Course name: Presentation of results at local conference
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: III.	
Prerequisites:	
Conditions for course completion: Active participation in the home conference.	
Learning outcomes: By actively participating in the national scientific conference, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology in his scientific field. He demonstrates the ability to reflect on a specific scientific problem by using the latest approaches and applying them critically. Demonstrates competence in using existing theories and concepts in an innovative way, as well as generating new original scientific knowledge and communicating research results to a wider audience using adequate means and through the Slovak language.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPDZ/24	Course name: Presentation of results at local conference with international participation
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Active participation in a national conference with foreign participation.	
Learning outcomes: By actively participating in a scientific conference, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology in his scientific field. He demonstrates the ability to reflect on a specific scientific problem by using the latest approaches and applying them critically. Demonstrates competence to use existing theories and concepts in an innovative way, as well as generate new original scientific knowledge and communicate research results to a wider audience by adequate means and through Slovak or a foreign language.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 2	
abs	n
100.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPSM/24	Course name: Presentation of results in seminar
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Presentation at the seminar	
Learning outcomes: By actively participating in the seminar, the PhD student demonstrates the ability to identify, evaluate, and apply correct scientific methods or research methodology in his field of study. He demonstrates the ability to reflect on a specific scientific problem by using the latest approaches and applying them critically. Demonstrates competence in using existing theories and concepts in an innovative way, as well as generating new original scientific knowledge and communicating research results by adequate means and through Slovak or a foreign language.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 2	
abs	n
100.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dZVG/24	Course name: Principal investigator of internal grant (VVGS)
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Principal investigator of an internal grant (VVGS)	
Learning outcomes: The PhD student demonstrates the ability to process a successful application for his own research problem within the internal grant system at UPJŠ. Acquires skills with the design of research stages, their time schedule, measurable outputs and adequate distribution of funds. The very solution of the internal VVGS grant acquires the ability to implement the project intention according to the established procedure, to be responsible for achieving the set outputs. As a responsible researcher, the PhD student acquires competencies in project management, its administration, and presentation of results.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 1	
abs	n
100.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/ PAHD/15	Course name: Probabilistic and approximate algorithms
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: 9	
Recommended semester/trimester of the course: 2., 4.	
Course level: III.	
Prerequisites:	
Conditions for course completion: Written test combined with an oral examination.	
Learning outcomes: Providing an extended background in the area of probabilistic and approximation algorithms, with respect to their classification, efficiency, and probability of error.	
Brief outline of the course: <ol style="list-style-type: none"> 1. Elementary probability theory. Basic probabilistic computational models. 2. Las Vegas algorithms, One-sided error Monte Carlo algorithms. 3. Two-sided error Monte Carlo algorithms, with bounded and unbounded-error. 4. Probabilistic classes with polynomial time. 5. Foiling the adversary 6. Hashing. 7. Fingerprinting. 	
Recommended literature: <ol style="list-style-type: none"> 1. HROMKOVIČ, J.: Design and analysis of randomized algorithms. Springer-Verlag, 2005. ISBN 3-540-23949-9. 2. MOTWANI, R. and RAGHAVAN, P.: Randomized Algorithms. Cambridge University Press 1995. ISBN 0-521-47465-5 3. MITZEMANCHER, M. and UPFAL, E.: Probability and Computing: Randomized Algorithms and Probabilistic Analysis. Cambridge University Press 2005. ISBN 0-521-83540 2 4. HROMKOVIČ, J.: Communication Protocols - An Exemplary Study of the Power of Randomness. In: Handbook on Randomized Computing, P.Pardalos, S.Rajasekaran, J.Reif, J.Rolim, Eds., Kluwer Publ., 2001. 	
Course language: Slovak or English	
Notes: Content prerequisites: Basic knowledge of in the area of probability theory, computational complexity, and programming.	

Course assessment	
Total number of assessed students: 11	
N	P
0.0	100.0
Provides: prof. RNDr. Viliam Geffert, DrSc., prof. RNDr. Gabriel Semanišin, PhD.	
Date of last modification: 23.11.2021	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/PsVU/17	Course name: Psychology for University Lecturers
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: Per study period: 28s Course method: distance, present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Case study, micro-output, its analysis Current modifications of the course are listed in the electronic bulletin board of the course.	
Learning outcomes: After completing the course, students will gain knowledge that allows them to understand, summarize and explain selected psychological knowledge from cognitive psychology, emotion and motivation psychology, personality psychology, developmental, social, educational psychology and health psychology. They will acquire skills to apply the above psychological knowledge necessary for the professional, competent performance of university teaching practice of doctoral students to create and implement the teaching of a professional topic with applied psychological knowledge and develop the competences to create and implement teaching of a professional topic with the application of psychological knowledge, as well as to evaluate their performance and the performance of their classmates in the form of constructive feedback.	
Brief outline of the course: The content of the course is based on selected psychological knowledge of cognitive psychology, psychology of emotions and motivation, personality psychology, developmental, social, educational psychology and health psychology. Teaching is realized by a combination of lectures with interactive, experiential methods, discussion, open communication with mutual respect, support of independence, activity and motivation of students. Syllabus: University teacher and his work in the teaching process with a focus on: teachers in relation to themselves (cognitive, personal, social and competencies in the use of methods), in relation to students and as part of the teacher-student relationship on the basis of selected areas of cognitive psychology, psychology of emotions and motivation, developmental psychology, social psychology, educational psychology and health psychology with application to the university environment	
Recommended literature: Alexitch, L. R. (2005). Applying social psychology to education. Social Psychology.–Ed.: Schneider F., Gruman J., Coutts L.–Sage Publications, Inc, 205-228. Fry, H., Ketteridge, S., & Marshall, S. (2008). A handbook for teaching and learning in higher education: Enhancing academic practice. Routledge. Mareš, J.: Pedagogická psychologie. Portál, 2013.	

Kniha psychologie. Universum, 2014
 Čáp, J., Mareš, J.: Psychologie pro učitele. Praha: Portál 2007.
 Vágnerová, M.: Školní poradenská psychologie pro pedagogy. Praha: Karolínium 2005.
 Cuevas, J. A., Childers, G., & Dawson, B. L. (2023). A rationale for promoting cognitive science in teacher education: Deconstructing prevailing learning myths and advancing research-based practices. Trends in neuroscience and education, 100209.

Course language:

slovak

Notes:

Course assessment

Total number of assessed students: 87

abs	n	neabs
98.85	0.0	1.15

Provides: PhDr. Anna Janovská, PhD.

Date of last modification: 09.12.2024

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPDC/24	Course name: Publication in local journal
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 6	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a national journal as author/co-author.	
Learning outcomes: By publishing in a national journal as an author/co-author, the PhD student demonstrates a high level of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 12.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPNZ/24	Course name: Publication in non-reviewed proceedings
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: III.	
Prerequisites:	
Conditions for course completion: A publication published in a non-reviewed foreign or national journal as an author/co-author.	
Learning outcomes: By publishing in a non-reviewed foreign or national journal as an author/co-author, the PhD student demonstrates the ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to finalize his own thoughts in a written speech.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dTRF/10	Course name: Real functions theory
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course: 1., 3.	
Course level: III.	
Prerequisites:	
Conditions for course completion: exam	
Learning outcomes: Understanding of the basic rigorous ideas of Real Functions Theory.	
Brief outline of the course: Properties of real functions: continuity, gneralized continuity, quasi-uniform convergence, set of points of discontinuity, stationary sets, determining sets, metric preserving functions.	
Recommended literature: B. S. Thomson: Real Functions, Springer-Verlag, 1985, ISBN 3-540-16058-2. J. Doboš: Metric preserving functions, Štroffek, Košice, 1998, ISBN 80-88896-30-4.	
Course language: Slovak or English	
Notes:	
Course assessment Total number of assessed students: 1	
N	P
0.0	100.0
Provides: prof. RNDr. Jozef Doboš, CSc.	
Date of last modification: 14.09.2021	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dTRH/10	Course name: Risk and extreme value theory
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course: 1., 3.	
Course level: III.	
Prerequisites:	
Conditions for course completion: Based on written tests and oral exam.	
Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. To provide a grounding in extreme value theory with applications to insurance and finance.	
Brief outline of the course: Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the height of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. The elements of extreme value theory. Probability distributions of extremes, heavy-tailed, subexponential and stable distributions. The frequency of claim occurrence and waiting times for extremes. Methods for registration of extremes. Limit distributions for block-maxima, excesses-over-threshold and records. Methods of statistical analysis of extremes.	
Recommended literature: 1. Beirlant et al.: Statistics of extremes. Wiley, New York. 2004 2. Daykin et al.: Practical risk theory for actuarial. Chapman and Hall, 1994 3. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 4. Embrechts et al.: Modelling extremal events. Springer, Berlin, 1997 5. Mikosch T.M.: Non-life Insurance Mathematics, Springer, Berlin, 2009. 6. Časopisecká literatúra	
Course language: Slovak and English	
Notes:	

Course assessment	
Total number of assessed students: 3	
N	P
0.0	100.0
Provides: doc. RNDr. Martina Hančová, PhD., Mgr. Katarína Lučivjanská, PhD.	
Date of last modification: 15.04.2022	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dCSC/24	Course name: SCI or Scopus citation
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Obtained citation registered in SCI or Scopus.	
Learning outcomes: Obtaining a citation demonstrates broad and very well-founded scientific knowledge in the researched field, based on the ability to formulate research questions, to reflect on a scientific problem in such a way that generates new knowledge. At the same time, a citation in an indexed source demonstrates the competence to communicate new knowledge, which is a significant contribution to scientific knowledge, at the highest expert level.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dQ1M/24	Course name: Scientific publication in Q1 journal
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 30	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a journal of category Q1 as co-author.	
Learning outcomes: By publishing in a journal of category Q1 as a co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 11.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dQ1V/24	Course name: Scientific publication in Q1 journal with significant author's contribution
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 40	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a journal of category Q1 with author's share at least 25%.	
Learning outcomes: By publishing in a journal of category Q1 as the first or corresponding author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. A significant author's share will have a substantial impact on the number and quality of the publication results, on the implementation of software support for research, and on the formal processing of the publication itself in terms of content and graphics.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 13.01.2025	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dQ2M/24	Course name: Scientific publication in Q2 journal
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 20	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a journal of category Q2 as co-author.	
Learning outcomes: By publishing in a journal of category Q2 as a co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 11.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dQ2V/24	Course name: Scientific publication in Q2 journal with significant author's contribution
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 30	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a journal of category Q2 with author's share at least 25%.	
Learning outcomes: By publishing in a journal of category Q2 as the first or corresponding author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. A significant author's share will have a substantial impact on the number and quality of the publication results, on the implementation of software support for research, and on the formal processing of the publication itself in terms of content and graphics.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 13.01.2025	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dQ3M/24	Course name: Scientific publication in Q3 journal
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 15	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a journal of category Q3 as co-author.	
Learning outcomes: By publishing in a journal of category Q3 as a co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 11.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dQ3V/24	Course name: Scientific publication in Q3 journal with significant author's contribution
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 25	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a journal of category Q3 with author's share at least 25%.	
Learning outcomes: By publishing in a journal of category Q3 as the first or corresponding author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. A significant author's share will have a substantial impact on the number and quality of the publication results, on the implementation of software support for research, and on the formal processing of the publication itself in terms of content and graphics.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 13.01.2025	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dQ4M/24	Course name: Scientific publication in Q4 journal
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a journal of category Q4 as co-author.	
Learning outcomes: identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 11.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dQ4V/24	Course name: Scientific publication in Q4 journal with significant author's contribution
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 20	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a journal of category Q4 with author's share at least 25%.	
Learning outcomes: By publishing in a journal of category Q4 as the first or corresponding author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. A significant author's share will have a substantial impact on the number and quality of the publication results, on the implementation of software support for research, and on the formal processing of the publication itself in terms of content and graphics.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 13.01.2025	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPZC/24	Course name: Scientific publication in international journal
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Publication accepted in a foreign journal as an author/co-author.	
Learning outcomes: By publishing in a foreign journal as an author/co-author, the PhD student demonstrates a high level of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 12.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPRZ/24	Course name: Scientific publication in peer-reviewed proceedings
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: A publication published in a peer-reviewed foreign or national proceedings as an author/co-author.	
Learning outcomes: By publishing in a peer-reviewed foreign or national journal as an author/co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dSVU/24	Course name: Software in public repository
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: A created software product stored in a public repository.	
Learning outcomes: The PhD student demonstrates the ability to create a stand-alone or supporting software product in a form that can be used by other researchers.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 13.01.2025	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: Dek. PF UPJŠ/JSD/14	Course name: Spring School for PhD Students
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: Per study period: 4d Course method: distance, present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Active participation in the Spring School of PhD students of UPJŠ.	
Learning outcomes: By actively participating in the Spring School of PhD Students of UPJŠ, the PhD student demonstrates a high level of ability to process the issues of his dissertation for a multidisciplinary audience with an emphasis on clarifying the motivation, scientific problem, processing methodology and own contribution to the solution of the selected topic. The PhD student demonstrates the ability to professionally discuss various research topics, present his own positions and accept a plurality of opinions. Demonstrates the ability to communicate research results to a wider professional audience with adequate means and through the Slovak language.	
Brief outline of the course: 1. Interdisciplinary lectures from the fields of medicine, natural sciences, law, public affairs, humanities. Lecturers - top foreign or national experts from the mentioned fields. 2. Scientific lectures in sections created within related disciplines. Lecturers - top experts from UPJŠ from the mentioned fields. 3. Scientific contributions of PhD students in sections of related fields. 4. Panel discussions on the issue of PhD studies and current trends in the development of scientific disciplines at UPJŠ.	
Recommended literature: Proceedings of the Spring School of Doctoral Students.	
Course language:	
Notes:	
Course assessment Total number of assessed students: 203	
abs	n
100.0	0.0
Provides: doc. RNDr. Marián Kireš, PhD.	

Date of last modification: 08.11.2022
Approved: prof. RNDr. Katarína Cechlárová, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPZR/24	Course name: Submitted scientific work
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 10	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Scientific work after being sent to the editorial office as an author/co-author.	
Learning outcomes: By sending a manuscript to the editors of a scientific journal as an author/co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to formulate his own ideas in a structured form.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 1	
abs	n
100.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dVSS/24	Course name: Supervision of student scientific work
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Supervision of Student's Scientific Activity	
Learning outcomes: By guiding a student within the SOČ or ŠVOČ, the PhD student demonstrates broad and scientifically based knowledge in the field of study, as well as knowledge of a wide range of methods and approaches. Demonstrates the ability to critically assess a professional problem and its proposed solution, as well as to evaluate it and possibly propose another solution. He applies knowledge and skills from the field of pedagogical sciences to his own field.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPPC1/24	Course name: Teaching activities 1 h/s
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: III.	
Prerequisites:	
Conditions for course completion: Direct teaching activity 1 semester hour	
Learning outcomes: Through pedagogical activity, the PhD student demonstrates the ability to transfer and integrate knowledge from his own field of study into education. He is able to select and apply the right techniques and strategies of study group management, higher education and evaluation of learning outcomes. He is capable of designing and implementing part of the educational process in accordance with current trends in higher education and the requirements placed on the level of communication and digital competencies.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPPC2/24	Course name: Teaching activities 2 h/s
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: III.	
Prerequisites:	
Conditions for course completion: Direct teaching activity 2 semester hours	
Learning outcomes: Through pedagogical activity, the PhD student demonstrates the ability to transfer and integrate knowledge from his own field of study into education. He is able to select and apply the right techniques and strategies of study group management, higher education and evaluation of learning outcomes. He is capable of designing and implementing part of the educational process in accordance with current trends in higher education and the requirements placed on the level of communication and digital competencies.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPPC3/24	Course name: Teaching activities 3 h/s
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 6	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Direct teaching activity 3 semester hours	
Learning outcomes: Through pedagogical activity, the PhD student demonstrates the ability to transfer and integrate knowledge from his own field of study into education. He is able to select and apply the right techniques and strategies of study group management, higher education and evaluation of learning outcomes. He is capable of designing and implementing part of the educational process in accordance with current trends in higher education and the requirements placed on the level of communication and digital competencies.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dPPC4/24	Course name: Teaching activities 4 h/s
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Direct teaching activity 4 semester hours	
Learning outcomes: Through pedagogical activity, the PhD student demonstrates the ability to transfer and integrate knowledge from his own field of study into education. He is able to select and apply the right techniques and strategies of study group management, higher education and evaluation of learning outcomes. He is capable of designing and implementing part of the educational process in accordance with current trends in higher education and the requirements placed on the level of communication and digital competencies.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dKZP/24	Course name: Thesis consultant
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: III.	
Prerequisites:	
Conditions for course completion: Final thesis consultant.	
Learning outcomes: By consulting the final thesis, the PhD student demonstrates broad and scientifically based knowledge in the field of study, as well as knowledge of a wide range of methods and approaches. Demonstrates the ability to critically assess a professional problem and its proposed solution, as well as to evaluate it and possibly propose another solution. He applies knowledge and skills from the field of pedagogical sciences to his own field.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ dVZP/24	Course name: Thesis supervising
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of ECTS credits: 8	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisites:	
Conditions for course completion: Supervisor of the final thesis.	
Learning outcomes: By supervising the final thesis, the PhD student demonstrates broad and scientifically based knowledge in the field of study, as well as knowledge of a wide range of methods and approaches. Demonstrates the ability to critically assess a professional problem and its proposed solution, as well as to evaluate it and possibly propose another solution. He applies knowledge and skills from the field of pedagogical sciences to his own field.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 0	
abs	n
0.0	0.0
Provides:	
Date of last modification: 05.03.2024	
Approved: prof. RNDr. Katarína Cechlárová, DrSc.	