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University: P. J. Šafán	ik University in Košice	
Faculty: Faculty of So	cience	
Course ID: ÚCHV/ PKLB/13	Course name: Advances	in Clinical Biochemistry
Course type, scope an Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	e / Practice se-load (hours): study period: 28 / 28	
Number of ECTS cro	edits: 8	
Recommended semes	ster/trimester of the cour	se:
Course level: III.		
Prerequisities:		
with the examiner abo	har paper on a topic related	to the subject Klinical Biochemistry. A discussion work, in which the student is given the opportunity of the subject.
Learning outcomes: Familiarize postgrad pathobiochemistry.	uate students with newes	st knowledge from medicinal biochemistry and
		e, kidney, pancreas, gland, heart, blood circulation, oplication into practice.
Recommended litera Rosenthal, M.D., Gle Wiley and Sons, 2009	w, R.H.: Medical biochem	istry – human metabolism in health and disease,
Course language: English		
	g format is specified by the	notely/hybrid learning using the MS Teams e teacher at the beginning of the semester and
Course assessment Total number of asses	sed students: 6	
	Ν	Р
	0.0	100.0
Provides: prof. RNDr	. Mária Kožurková, CSc.	
Date of last modifica	tion: 13.03.2023	
Approved: prof. RNE	Pr. Mária Kožurková, CSc.	

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚCHV/ BINF/06	Course name: Bioinforr	natics
Course type, scope a Course type: Lectu Recommended cou Per week: 4 / 2 Per Course method: pr	re / Practice rse-load (hours): study period: 56 / 28	
Number of ECTS cr	redits: 10	
Recommended seme	ester/trimester of the cou	rse:
Course level: III.	-	
Prerequisities:	-	
Conditions for cour Independent work or Final assignment, ex	n assignments during the s	emester
analyzing biological VNTI-Viewer, MAG In addition to basic in	tain information and pra sequences using either a I A), as well as using softw nformation, students will a	ctical experience with methods of obtaining and PC and freely available software (BioEdit, RasMol, are available via the www network. lso get information about some specialized analyzes nd prediction of biopolymer structures.
(PubMed, GenBank, Pairwise sequence co	ne web servers in sequer SwissProt). Analysis of n omparisons - blast analysis of bacteria. Evolutionary	ace analysis. Freely available biological databases ucleotide sequences. Analysis of protein sequences. s. Multiple sequence comparison - clustal program. and phylogenetic analyses. Predicting the secondary
485 pp Bioinformatics: a pra	ndbook, Salemi, M. a Van	damme, A-M., Cambridge University Press, 2003, s of genes and proteins, Baxevanis, AD; Francis
Course language: slovak, english		
Notes:		
Course assessment Total number of asse	essed students: 44	
	N	р
	1	1

Provides: doc. RNDr. Peter Pristaš, CSc., univerzitný profesor

Date of last modification: 09.08.2022

Approved: prof. RNDr. Mária Kožurková, CSc.

	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ COK/22	Course name: Certified tra	aining course
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr		
Recommended seme	ster/trimester of the cours	se:
Course level: III.		
Prerequisities:		
Conditions for cours	se completion: ified professional/training co	
		ourse.
Learning outcomes: The PhD student acq work and familiarize He confronts his own	uires up-to-date scientific k s himself with the methodo	knowledge, develops the capabilities of scientific ologies of making scientific knowledge available. other course participants, develops the abilities of
Learning outcomes: The PhD student acq work and familiarize He confronts his own	uires up-to-date scientific k s himself with the methodo knowledge and skills with e given scientific field.	knowledge, develops the capabilities of scientific blogies of making scientific knowledge available.
Learning outcomes: The PhD student acq work and familiarize He confronts his own peer discussion in the	uires up-to-date scientific k s himself with the methodo h knowledge and skills with e given scientific field.	knowledge, develops the capabilities of scientific blogies of making scientific knowledge available.
Learning outcomes: The PhD student acq work and familiarize He confronts his own peer discussion in the Brief outline of the c	uires up-to-date scientific k s himself with the methodo h knowledge and skills with e given scientific field.	knowledge, develops the capabilities of scientific blogies of making scientific knowledge available.
Learning outcomes: The PhD student acq work and familiarize He confronts his own peer discussion in the Brief outline of the c Recommended litera	uires up-to-date scientific k s himself with the methodo h knowledge and skills with e given scientific field.	knowledge, develops the capabilities of scientific blogies of making scientific knowledge available.
Learning outcomes: The PhD student acq work and familiarize He confronts his own peer discussion in the Brief outline of the c Recommended litera Course language:	uires up-to-date scientific k s himself with the methodo h knowledge and skills with e given scientific field. course: nture:	knowledge, develops the capabilities of scientific blogies of making scientific knowledge available.
Learning outcomes: The PhD student acq work and familiarize He confronts his own peer discussion in the Brief outline of the c Recommended litera Course language: Notes: Course assessment	uires up-to-date scientific k s himself with the methodo h knowledge and skills with e given scientific field. course: nture:	knowledge, develops the capabilities of scientific blogies of making scientific knowledge available.
Learning outcomes: The PhD student acq work and familiarize He confronts his own peer discussion in the Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	uires up-to-date scientific k s himself with the methodo h knowledge and skills with e given scientific field. course: nture: ssed students: 1	knowledge, develops the capabilities of scientific ologies of making scientific knowledge available. other course participants, develops the abilities of
Learning outcomes: The PhD student acq work and familiarize He confronts his own peer discussion in the Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	uires up-to-date scientific k s himself with the methodo h knowledge and skills with e given scientific field. course: nture: ssed students: 1 abs	n
Learning outcomes: The PhD student acq work and familiarize He confronts his own peer discussion in the Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	uires up-to-date scientific k s himself with the methodo h knowledge and skills with e given scientific field. course: nture: ssed students: 1 abs 100.0	n

~		
University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ CZC/22	Course name: Citation in t	the International Scientific Journal
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period: esent	
Number of ECTS cr		
	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Obtained citation in a	e completion: a foreign scientific journal.	
	domesmaturates bused and	wanty well form dad according to available in the
researched field, bas problem in such a wa source demonstrates contribution to scient	ed on the ability to formula ay that generates new knowl the competence to commu- ific knowledge, at the highe	very well-founded scientific knowledge in the ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significan st expert level
researched field, bas problem in such a wa source demonstrates contribution to scient Brief outline of the c	ed on the ability to formula ay that generates new knowl the competence to commu- fific knowledge, at the highe course:	ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significan
researched field, bas problem in such a wa source demonstrates contribution to scient Brief outline of the c Recommended litera	ed on the ability to formula ay that generates new knowl the competence to commu- fific knowledge, at the highe course:	ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significan
researched field, bas problem in such a wa source demonstrates contribution to scient Brief outline of the c Recommended litera Course language:	ed on the ability to formula ay that generates new knowl the competence to commu- fific knowledge, at the highe course:	ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significan
researched field, bas problem in such a wa source demonstrates contribution to scient Brief outline of the c Recommended litera	ed on the ability to formula ay that generates new knowl the competence to commu- ific knowledge, at the highe ourse: nture: ssed students: 15	ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significan
researched field, bas problem in such a wa source demonstrates contribution to scient Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	ed on the ability to formula ay that generates new knowl the competence to commu- ific knowledge, at the highe ourse: nture: ssed students: 15 abs	ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significan st expert level
researched field, bas problem in such a wa source demonstrates contribution to scient Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	ed on the ability to formula ay that generates new knowl the competence to commu- ific knowledge, at the highe ourse: nture: ssed students: 15	ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significan st expert level
researched field, bas problem in such a wa source demonstrates contribution to scient Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	ed on the ability to formula ay that generates new knowl the competence to commu- ific knowledge, at the highe ourse: nture: ssed students: 15 abs	ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significan st expert level
researched field, bas problem in such a wa source demonstrates contribution to scient Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	ed on the ability to formula ay that generates new knowl the competence to commu- ific knowledge, at the highe ourse: nture: ssed students: 15 abs 100.0	ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significan st expert level

University: P. J. Šafán	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ CDC/22	Course name: Citation	in the Local Scientific Journal
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cr	edits: 2	
Recommended seme	ster/trimester of the co	urse:
Course level: III.		
Prerequisities:		
Conditions for cours Citation in a national	1	
researched field, base problem in such a wa source demonstrates	ed on the ability to for ay that generates new kr the competence to con ific knowledge, at the h	nd very well-founded scientific knowledge in the mulate research questions, to reflect on a scientific nowledge. At the same time, a citation in an indexed mmunicate new knowledge, which is a significant ighest expert level
Recommended litera		
Course language:		
Notes:		
Course assessment Total number of asses	ssed students: 0	
	abs	n
	0.0	0.0
	0.0	0.0
Provides:	0.0	
Provides: Date of last modifica		

University: P. J. Šafá	rik University in Košic	ce
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ CM/22	Course name: Citatio	on in the Monograph
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 8	
Recommended seme	ster/trimester of the o	course:
Course level: III.		
Prerequisities:		
Conditions for cours Obtained citation reg	e completion: istered in SCI or Scop	us.
researched field, bas problem in such a wa source demonstrates	ed on the ability to for ay that generates new 1	and very well-founded scientific knowledge in the ormulate research questions, to reflect on a scientific knowledge. At the same time, a citation in an indexed ommunicate new knowledge, which is a significant highest expert level.
Brief outline of the c	ourse:	
Recommended litera	nture:	
Course language:		
Notes:		
Course assessment Total number of asses	ssed students: 0	
	abs	n
	0.0	0.0
Provides:		
Provides: Date of last modifica	ition: 08.11.2022	

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University: P. J. Šafár	rik University in Košice	
Faculty: Faculty of So	cience	
Course ID: ÚCHV/ SPAV/22	Course name: Co-inves	tigator of the applied research project
Course type, scope an Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cre	edits: 5	
Recommended semes	ster/trimester of the cou	rse:
Course level: III.		
Prerequisities:		
Conditions for cours Co-investigator of the	e completion: e applied research project	
to the solution of the tasks. By solving an objective according to own activities with co	project objective of appl applied research project to the established procedu olleagues, to participate in	rticipate in teamwork, to bring his own contribution ied research and to take responsibility for assigned t, he acquires the ability to implement the project re, to follow the project schedule, to coordinate his in the creation of applied research outputs. The PhD tical course of a grant project with a focus on applied
Brief outline of the c	ourse:	
Recommended litera	ture:	
Course language:		
Notes:		
Course assessment Total number of asses	ssed students: 0	
	abs	n
	0.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	

	rik University in K	nšice
Faculty: Faculty of S		
		-worker of a Local Project
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 10	
Recommended seme	ster/trimester of t	he course:
Course level: III.		
Prerequisities:		
Conditions for cours Co-investigator of the	-	
		y to participate in teamwork, to bring his own contributio
The PhD student dem to the solution of th solving the domestic to the established pro colleagues, to partici from the practical con	ne project objectiv project, he acquire ocedure, to follow pate in the creatio urse of the grant pr	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience
The PhD student dem to the solution of th solving the domestic to the established pro colleagues, to partici from the practical con Brief outline of the c	ne project objectiv project, he acquire ocedure, to follow pate in the creatio urse of the grant pr course:	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience
The PhD student dem to the solution of th solving the domestic to the established pro colleagues, to partici from the practical con	ne project objectiv project, he acquire ocedure, to follow pate in the creatio urse of the grant pr course:	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience
The PhD student dem to the solution of th solving the domestic to the established pro colleagues, to partici from the practical con Brief outline of the c Recommended litera	ne project objectiv project, he acquire ocedure, to follow pate in the creatio urse of the grant pr course:	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience
The PhD student dem to the solution of th solving the domestic to the established pro- colleagues, to partici from the practical con Brief outline of the c Recommended litera Course language: Notes:	ne project objectiv project, he acquire ocedure, to follow pate in the creatio urse of the grant pr course:	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience
The PhD student dem to the solution of th solving the domestic to the established pro- colleagues, to partici from the practical con Brief outline of the c Recommended litera Course language: Notes:	ne project objectiv project, he acquire ocedure, to follow ipate in the creatio urse of the grant pr course: ature:	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience
The PhD student dem to the solution of th solving the domestic to the established pro- colleagues, to partici- from the practical con Brief outline of the c Recommended litera Course language: Notes: Course assessment	ne project objectiv project, he acquire ocedure, to follow ipate in the creatio urse of the grant pr course: ature:	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience
The PhD student dem to the solution of th solving the domestic to the established pro- colleagues, to partici- from the practical con Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	ne project objectiv project, he acquire ocedure, to follow ipate in the creatio urse of the grant pr course: ature: ssed students: 59	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience oject.
The PhD student dem to the solution of th solving the domestic to the established pro- colleagues, to partici- from the practical con Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	ne project objectiv project, he acquire ocedure, to follow ipate in the creatio urse of the grant pr course: ature: ssed students: 59 abs	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience oject.
The PhD student dem to the solution of th solving the domestic to the established pro- colleagues, to partici- from the practical con Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	ne project objectiv project, he acquire ocedure, to follow ipate in the creatio urse of the grant pr course: ature: ssed students: 59 abs 100.0	e and to take responsibility for the assigned tasks. B s the ability to implement the project intention accordin he project schedule, to coordinate his own activities wit n of outputs. The PhD student gains valuable experience oject.

	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ SMPR/04	Course name: Co-worker	of an International Project
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cr	edits: 15	
Recommended seme	ster/trimester of the cours	se:
Course level: III.		
Prerequisities:		
Conditions for cours Membership in the re	e completion: search team of an internation	onal project.
The PhD student der task, adhere to the tin experience from the creation of measurab	nonstrates the ability to wo me schedule and fulfill the implementation of an inter- le outputs, grant funding of	within a team of international project solvers. rk in a team, take responsibility for the assigned project outputs. The PhD student gains personal rnational project, participation in its key stages, science.
Brief outline of the c	ourse:	
Recommended litera	ture:	
Recommended litera Course language:	ture:	
	iture:	
Course language:		
Course language: Notes: Course assessment		n
Course language: Notes: Course assessment Total number of asses	ssed students: 44	n 0.0
Course language: Notes: Course assessment Total number of asses	ssed students: 44 abs	
Course language: Notes: Course assessment Total number of asses	ssed students: 44 abs 100.0	

University: P. J. Safa	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚCHV/ KSB/13	Course name: Conformational Stability of Proteins
Course type, scope a Course type: Lectur Recommended cour Per week: 4 / 2 Per Course method: pre	e / Practice rse-load (hours): study period: 56 / 28
Number of ECTS cro	edits: 8
Recommended seme	ster/trimester of the course:
Course level: III.	
Prerequisities:	
Conditions for cours Examination.	e completion:
Learning outcomes: Student should attain	n extended knowledge in the field of conformation properties of proteins,
Student should attain folding and biosynth proteins, new techniq Brief outline of the c 1. Chemical propertie	esis of proteins, formation and characteristics of missfodled and agregated ues in study of proteins: solvent engineering, display/evolution technologies ourse: es of polypeptides (the polymeric nature of proteins, amino acid residues, the
Student should attain folding and biosynth proteins, new techniq Brief outline of the c 1. Chemical properties polypeptide backbond 2. Protein structure d proteins, conformation 3. Proteins in solution globular proteins) – protein structure. Miss 4. Protein stability –	esis of proteins, formation and characteristics of missfodled and agregated ues in study of proteins: solvent engineering, display/evolution technologies. ourse: es of polypeptides (the polymeric nature of proteins, amino acid residues, the e). letermination methods. Physical interaction that determine the properties of nal properties of polypeptide chains. Biosynthesis of proteins. n and in membrane (folded state, missfolded states and denatured states of stability of the folded conformations of proteins, flexibility and dynamics of folded and aggregated states of proteins.
Student should attain folding and biosynth proteins, new techniq Brief outline of the c 1. Chemical properties polypeptide backbond 2. Protein structure d proteins, conformation 3. Proteins in solution globular proteins) – protein structure. Mis 4. Protein stability – stability. Modification Recommended litera 1. David L. Nelson, M York, 2004. 2. J.M. Berg, J.L. Tyr	esis of proteins, formation and characteristics of missfolled and agregated ues in study of proteins: solvent engineering, display/evolution technologies. ourse: es of polypeptides (the polymeric nature of proteins, amino acid residues, the e). etermination methods. Physical interaction that determine the properties of nal properties of polypeptide chains. Biosynthesis of proteins. n and in membrane (folded state, missfolded states and denatured states of stability of the folded conformations of proteins, flexibility and dynamics of folded and aggregated states of proteins. thermodynamic and kinetic stability. Methods for determination of protein n of protein stability: solvent engineering, display/evolution technologies. ture: <i>M</i> ichael M. Fox, Lenhinger principles of biochemistry, W.H.Freeman, New noczko, L. Stryer, Biochemistry, W.H.Freeman, New York, 2007. on, Proteins, Structure and Molecular Properties (2nd Ed.), W.H.Freeman;
Student should attain folding and biosynth proteins, new techniq Brief outline of the c 1. Chemical properties polypeptide backbond 2. Protein structure d proteins, conformatio 3. Proteins in solutio globular proteins) – protein structure. Mis 4. Protein stability – stability. Modification Recommended litera 1. David L. Nelson, M York, 2004. 2. J.M. Berg, J.L. Tyr 3. Thomas E. Creight New York, 1993.	es of polypeptides (the polymeric nature of proteins, amino acid residues, the e). etermination methods. Physical interaction that determine the properties of nal properties of polypeptide chains. Biosynthesis of proteins. n and in membrane (folded state, missfolded states and denatured states of stability of the folded conformations of proteins, flexibility and dynamics of folded and aggregated states of proteins. thermodynamic and kinetic stability. Methods for determination of protein n of protein stability: solvent engineering, display/evolution technologies. ture: <i>M</i> ichael M. Fox, Lenhinger principles of biochemistry, W.H.Freeman, New noczko, L. Stryer, Biochemistry, W.H.Freeman, New York, 2007. on, Proteins, Structure and Molecular Properties (2nd Ed.), W.H.Freeman;

Course assessment Total number of assessed students: 6	
N	Р
0.0	100.0
Provides: prof. RNDr. Erik Sedlák, DrSc.	
Date of last modification: 13.03.2023	
Approved: prof. RNDr. Mária Kožurková, CSc.	

	COURSE INFORM	MATION LETTER
University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ ODZP/15	Course name: Defence of	Doctoral Thesis
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cr	edits: 30	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
elements of academic Rector's Decision no. Šafárik University in	c fraud and must meet the c 21/2021, which lays down Košice and its constituents	lent's own scientific research. It must not show riteria of correct research practice defined in the the rules for assessing plagiarism at Pavel Jozef s. Fulfillment of the criteria is verified mainly in the thesis defense. Failure to do so is grounds for
mastery of the theory skills and competence as well as the ability of study. The student formal and ethical asp 1/2011 on the essenti in Košice for doctora The doctoral student activity in the field qualification framewo	and professional terminolog es in accordance with the dec to apply them in an origin demonstrates the ability of pects. Further details of the D al prerequisites of final thes l studies. demonstrated the ability and of study of philology in ac ork and the profile of the gra	fic work and the student demonstrates extensive gy of the field of study, acquisition of knowledge, clared profile of the graduate of the field of study, al way in solving selected problems of the field independent scientific work in terms of content, Dissertation thesis are determined by Directive no. ses and by the Study Rules of Procedure at UPJŠ I readiness for independent scientific and creative ccordance with the expectations of the relevant aduate.
Brief outline of the c	ourse:	
Recommended litera	ture:	
Course language:		
Notes:		
Course assessment Total number of asses	ssed students: 76	
	N	Р
	0.0	100.0

Provides:

Date of last modification: 08.11.2022

Approved: prof. RNDr. Mária Kožurková, CSc.

	rik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚCHV/ VPZP/22	Course name: Elaboration	n of reviewer report
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	redits: 3	
Recommended seme	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Elaboration of review	-	
Learning outcomes:		
well as knowledge of assess a professional	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know	ifically based knowledge in the field of study, as d approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly vledge and skills from the field of pedagogical
The PhD student der well as knowledge of assess a professional recommend another	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know ield.	d approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly
The PhD student der well as knowledge of assess a professional recommend another sciences to his own f	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know field.	d approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly
The PhD student der well as knowledge of assess a professional recommend another sciences to his own f Brief outline of the c	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know field.	d approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly
The PhD student der well as knowledge of assess a professional recommend another sciences to his own f Brief outline of the c Recommended litera	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know field.	d approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly
The PhD student der well as knowledge of assess a professional recommend another sciences to his own f Brief outline of the of Recommended litera Course language:	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know ield. course: ature:	d approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly
The PhD student der well as knowledge of assess a professional recommend another sciences to his own f Brief outline of the of Recommended liters Course language: Notes: Course assessment	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know ield. course: ature:	d approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly
The PhD student der well as knowledge of assess a professional recommend another sciences to his own f Brief outline of the of Recommended liters Course language: Notes: Course assessment	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know field. course: ature:	approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly vledge and skills from the field of pedagogical
The PhD student der well as knowledge of assess a professional recommend another sciences to his own f Brief outline of the of Recommended liters Course language: Notes: Course assessment	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know field. course: ature: ssed students: 1 abs	h approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly vledge and skills from the field of pedagogical
The PhD student der well as knowledge of assess a professional recommend another sciences to his own f Brief outline of the of Recommended litera Course language: Notes: Course assessment Total number of asse	nonstrates broad and scient a wide range of methods and l problem and its proposed solution. He applies know field. course: ature: ssed students: 1 abs 100.0	h approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly vledge and skills from the field of pedagogical

Faculty: Faculty of Science Course ID: CJP/ AJD1/07 Course name: English Language for PhD Students 1 Course type, scope and the method: Course type: Practice Recommended course-load (hours): Course type: Practice
AJD1/07 Course type, scope and the method: Course type: Practice Recommended course-load (hours):
Course type: Practice Recommended course-load (hours):
Per week: 2 Per study period: 28 Course method: distance, present
Number of ECTS credits: 2
Recommended semester/trimester of the course:
Course level: III.
Prerequisities:
Conditions for course completion: Completion of e-course English for PhD Students (lms.upjs.sk), consultations (1-3). Written assignments - Professional/Academic CV, Short Academic Biography.
Learning outcomes: The development of students' language skills - reading, writing, listening, speaking; improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects; development of pragmatic competence - students acquire skills for effective and purposeful communication, with focus on Academic English and English for specific/professional purposes, level B2.
Brief outline of the course: Specific aspects of academic and professional English with focus on correct pronunciation, vocabulary development (noun and verb collocations, phrasal verbs, prepositional phrases, word-formation, formal/informal language, etc.), selected aspects of English grammar (prepositions, grammar tenses, passive voice, etc.), academic writing (professional/academic CV, Short Academic Biography).
Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí – cvičebnica. Košice, Vydavateľstvo ŠafárikPress, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011. Ims.upjs.sk
Course language: English, level B2 according to CEFR
Notes:

Course assessm Total number of	nent f assessed studen	ts: 813			
N	Ne	Р	Pr	abs	neabs
0.0	0.0	43.79	0.0	56.09	0.12
Provides: Mgr.	Zuzana Kolaříko	vá, PhD., Mgr. I	vana Kupková, P	hD.	
Date of last mo	dification: 06.09	0.2024			
Approved: prof	f. RNDr. Mária K	ložurková, CSc.			

MD2/07 Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: distance, present Number of ECTS credits: 3 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/darta/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolafková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJS Košice, 2021. UPJŠ Košice, 20		COURSE INFORMATION LETTER
Course ID: CJP/ AJD2/07 Course name: English Language for PhD Students 2 Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: distance, present Per week: 2 Per study period: 28 Course method: distance, present Number of ECTS credits: 3 Recommended semester/trimester of the course: Course level: III. Perequisities: Conditions for course completion: Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS)	University: P. J. Šafá	rik University in Košice
MD2/07 Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: distance, present Number of ECTS credits: 3 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Rest and a semester/trimester of the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: Intervention of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommendel literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolafiková, Z., Petrañová, H., Timková, R.: Angličtina v akademickom prostredi (evičebnica). UPJS Košice, 2021. Tomaščiková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. <th>Faculty: Faculty of S</th> <th>cience</th>	Faculty: Faculty of S	cience
Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: distance, present Vumber of ECTS credits: 3 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of the inliguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J. Oxford Academic Vocabulary Practice. OUP, 2017. Kolafiková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavatel'stvo ŠafărikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Stepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011. Course language:	Course ID: CJP/ AJD2/07	Course name: English Language for PhD Students 2
Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) <i>Learning outcomes:</i> The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolafiková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo Šafárik/Press, 2021. Mccarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008.	Course type: Practic Recommended cour Per week: 2 Per stu	ce rse-load (hours): dy period: 28
Course level: III. Prerequisities: Conditions for course completion: Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Cearning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list). English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolafiková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščiková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Stepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Course language:	Number of ECTS cr	edits: 3
 Prerequisities: Conditions for course completion: Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafarikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011. 	Recommended seme	ster/trimester of the course:
Conditions for course completion: Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011. Course language:	Course level: III.	
 Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafařikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011. 	Prerequisities:	
The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafařikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011. Course language:		-
 Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011. 	The development of so of their linguistic co and syntactic aspects	ompetence - students acquire knowledge of selected phonological, lexical s, development of pragmatic competence - students can effectively use the
Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011.	Academic communic Specific aspects of a (formality, academic functions (expressing	cation (self-presentation, presenting at scientific meetings and conferences). academic and professional English with focus on vocabulary development c word-list), English grammar (passive voice, nominalisatio), language g opinion, cause/effect, presenting arguments, giving examples, describing
	Moore, J.: Oxford Ac Kolaříková, Z., Petru UPJŠ Košice, 2021. Tomaščíková, S., Roz Vydavateľstvo Šafári McCarthy, M., O'Dež Štepánek, L., J. De H 2011.	cademic Vocabulary Practice. OUP, 2017. ňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). zenfeld, J. Developing Academic English in Speaking and Writing. kPress, 2021. II, F.: Academic Vocabulary in Use. CUP, 2008. laff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s.,
	Course language: B2 level according to	CEFR
Notes:	Notes:	

Course assessm Total number of	nent f assessed studen	ts: 776			
N	Ne	Р	Pr	abs	neabs
0.26	0.0	94.07	1.03	4.51	0.13
Provides: Mgr.	Zuzana Kolaříko	vá, PhD.			
Date of last mo	dification: 03.02	2.2025			
Approved: prof	f. RNDr. Mária K	ožurková, CSc.			

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚCHV/ GI/06	Course name: Genetic Eng	gineering	
Course method: pre	re / Practice rse-load (hours): study period: 56 / 28 esent		
Number of ECTS cr			
	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of asse	ssed students: 17		
	Ν	Р	
	0.0	100.0	
Provides:			
Date of last modifica	tion: 16.11.2021		
Approved: prof. RNI	Dr. Mária Kožurková, CSc.		

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ SSOL/04	Course name: Individual	Study of Scientific Literature
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	edits: 2	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours	se completion:	
documents, obtaining preparation of public Brief outline of the c	g informations for elaboration ation, respectively.	n books, monographies, databases and source on of the thesis, for preparation of experiments or
Recommended litera Books, monographs, Web of Science, SCOPUS, original papers	Iterature following the sug	
Course language: English language.		
Notes:		
Course assessment Total number of asse	ssed students: 217	
	abs	n
	100.0	0.0
	100.0	0.0
Provides:		
Provides: Date of last modifica		

University: P. J. Safá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ ZC/22	Course name: Internation	al Journal
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	edits: 8	
Recommended seme	ster/trimester of the cours	Se:
Course level: III.		
Prerequisities:		
Conditions for course Publication accepted	e completion: in a foreign journal as an a	uthor/co-author.
level of ability to ide: He demonstrates the applying them critica an innovative way, as according to the high	ntify, evaluate, and apply co ability to reflect on a scier Illy. He demonstrates the co s well as to generate new or est qualitative and ethical sta	/co-author, the PhD student demonstrates a high prrect scientific methods or research methodology. htific problem by using the latest approaches and mpetence to use existing theories and concepts in iginal scientific knowledge, which he can publish andards of the field. The PhD student demonstrates eviewers' suggestions, to finalize his own ideas.
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 4	
	abs	n
	100.0	0.0
	100.0	
Provides:	100.0	
Provides: Date of last modifica		

	rik University in Ko)SICE
Faculty: Faculty of S	science	
Course ID: ÚCHV/ ZSP1/22	Course name: Inte	ernational Study Stay less than 30 Days
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	redits: 5	
Recommended seme	ester/trimester of th	ie course:
Course level: III.		
Prerequisities:		
Conditions for cours Completion of a fore	-	g less than 30 days.
Learning outcomes: By completing a shore	rter study stay, the P	hD student demonstrates the ability to reflect on research
By completing a short problems and work of while being able to go in more than one lang in a group with the air of research, to practio	critically with source enerate new knowled guage. He acts as a re m of pushing the boucce and to the wider p	PhD student demonstrates the ability to reflect on research ces at an expert level and in an interdisciplinary context, dge. He is able to actively communicate at an expert level esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas public. He can competently argue and explain his ideas.
By completing a shorp problems and work of while being able to go in more than one lang in a group with the air of research, to practice Brief outline of the c	critically with source enerate new knowled guage. He acts as a re m of pushing the boucce and to the wider p course:	tes at an expert level and in an interdisciplinary context adge. He is able to actively communicate at an expert level esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas
By completing a shorp problems and work of while being able to go in more than one lang in a group with the air of research, to practice Brief outline of the c Recommended litera	critically with source enerate new knowled guage. He acts as a re m of pushing the boucce and to the wider p course:	tes at an expert level and in an interdisciplinary context dge. He is able to actively communicate at an expert level esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas
By completing a shorp problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera Course language:	critically with source enerate new knowled guage. He acts as a re m of pushing the boucce and to the wider p course:	tes at an expert level and in an interdisciplinary context, dge. He is able to actively communicate at an expert level esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas
By completing a shor problems and work of while being able to g in more than one lang in a group with the air of research, to praction Brief outline of the c Recommended litera Course language: Notes:	critically with source enerate new knowled guage. He acts as a re m of pushing the boucce and to the wider p course:	tes at an expert level and in an interdisciplinary context dge. He is able to actively communicate at an expert level esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas
By completing a shor problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera Course language:	critically with sourc enerate new knowled guage. He acts as a re m of pushing the bou ce and to the wider p course:	tes at an expert level and in an interdisciplinary context dge. He is able to actively communicate at an expert level esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas
By completing a shor problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the of Recommended litera Course language: Notes: Course assessment	critically with sourc enerate new knowled guage. He acts as a re m of pushing the bou ce and to the wider p course:	tes at an expert level and in an interdisciplinary context dge. He is able to actively communicate at an expert level esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas
By completing a shor problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	critically with source enerate new knowled guage. He acts as a re- m of pushing the bou- ce and to the wider pro- course: ature: ssed students: 8	tees at an expert level and in an interdisciplinary context adge. He is able to actively communicate at an expert leve esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas public. He can competently argue and explain his ideas.
By completing a shor problems and work of while being able to g in more than one lang in a group with the air of research, to praction Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	critically with source enerate new knowled guage. He acts as a re- m of pushing the bou- ce and to the wider pro- course: ature: ssed students: 8 abs	es at an expert level and in an interdisciplinary context dge. He is able to actively communicate at an expert leve esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas public. He can competently argue and explain his ideas.
By completing a shor problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	critically with source enerate new knowled guage. He acts as a re- m of pushing the bou- ce and to the wider pro- course: ature: ssed students: 8 abs 100.0	here at an expert level and in an interdisciplinary context edge. He is able to actively communicate at an expert level esponsible independent scientist, works independently and undaries of knowledge and transferring them to other areas public. He can competently argue and explain his ideas.

	rik University in Kos	sice
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ ZSP2/22	Course name: Inter	rnational Study Stay more than 30 Days
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	redits: 10	
Recommended seme	ester/trimester of the	e course:
Course level: III.		
Prerequisities:		
Conditions for cours Completion of a fore	-	g more than 30 days.
Learning outcomes: By completing the s	study stay the PhD	student demonstrates the ability to reflect on research
By completing the sproblems and work of while being able to go in more than one lang in a group with the air	critically with source enerate new knowled guage. He acts as a res m of pushing the bound	student demonstrates the ability to reflect on research es at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and ndaries of knowledge and transferring them to other areas ublic. He can competently argue and explain his ideas.
By completing the sproblems and work of while being able to go in more than one lang in a group with the air	critically with source enerate new knowled guage. He acts as a res m of pushing the bounce and to the wider p	es at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and ndaries of knowledge and transferring them to other areas
By completing the sproblems and work of while being able to go in more than one lang in a group with the air of research, to praction	critically with source enerate new knowled guage. He acts as a res m of pushing the bounce and to the wider pre- course:	es at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and ndaries of knowledge and transferring them to other areas
By completing the sproblems and work of while being able to go in more than one lang in a group with the air of research, to practice Brief outline of the c	critically with source enerate new knowled guage. He acts as a res m of pushing the bounce and to the wider pre- course:	es at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and ndaries of knowledge and transferring them to other areas
By completing the sproblems and work of while being able to go in more than one lang in a group with the air of research, to practice Brief outline of the c Recommended litera	critically with source enerate new knowled guage. He acts as a res m of pushing the bounce and to the wider pre- course:	es at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and ndaries of knowledge and transferring them to other areas
By completing the sproblems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera Course language:	critically with source enerate new knowled guage. He acts as a res m of pushing the bounce and to the wider pre- course:	es at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and ndaries of knowledge and transferring them to other areas
By completing the sproblems and work of while being able to ge in more than one lang in a group with the air of research, to practice Brief outline of the c Recommended litera Course language: Notes: Course assessment	critically with source enerate new knowled guage. He acts as a res m of pushing the bounce and to the wider pre- course:	es at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and ndaries of knowledge and transferring them to other areas
By completing the s problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	critically with source enerate new knowled guage. He acts as a res m of pushing the bounce and to the wider pro- course: ature: ssed students: 7	es at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and ndaries of knowledge and transferring them to other areas ublic. He can competently argue and explain his ideas.
By completing the sproblems and work of while being able to go in more than one lang in a group with the air of research, to practice Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	critically with source enerate new knowled guage. He acts as a res m of pushing the bounce and to the wider pro- course: ature: ssed students: 7 abs	es at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and ndaries of knowledge and transferring them to other areas ublic. He can competently argue and explain his ideas.
By completing the sproblems and work of while being able to go in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	critically with source enerate new knowled guage. He acts as a res m of pushing the bounce and to the wider pro- course: ature: ssed students: 7 abs 100.0	hes at an expert level and in an interdisciplinary context, lge. He is able to actively communicate at an expert level sponsible independent scientist, works independently and indaries of knowledge and transferring them to other areas ublic. He can competently argue and explain his ideas.

University: P. J. Šafá	rik University in Košic	e
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ MKZ/22	Course name: Interna	ational conference abroad
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cr	edits: 10	
Recommended seme	ster/trimester of the c	course:
Course level: III.		
Prerequisities:		
Conditions for cours Active participation i	e completion: n an international conf	èrence abroad.
demonstrates a high research methodolog scientific problem b competence to use est	level of ability to iden y in his scientific field y using the latest app xisting theories and co owledge and communi	onal scientific conference abroad, the phD student tify, evaluate, and apply correct scientific methods or d. He demonstrates the ability to reflect on a specific proaches and applying them critically. Demonstrates incepts in an innovative way, as well as generate new icate research results to a wider audience by adequate
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 30	
abs n		
	100.0	0.0
Provides:		
110/1405.		
Date of last modifica	tion: 08.11.2022	

Faculty: Faculty of S	cience	
Course ID: ÚCHV/ DK/04	Course name: Local Conf	erence
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 2	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Active participation i	e completion: n the home conference.	
degree of ability to id in his scientific field using the latest approx theories and concepts	entify, evaluate, and apply co l. He demonstrates the abili aches and applying them crit s in an innovative way, as we	conference, the PhD student demonstrates a high prrect scientific methods or research methodology ity to reflect on a specific scientific problem by ically. Demonstrates competence in using existing Il as generating new original scientific knowledge
Slovak language.	research results to a wider	audience using adequate means and through the
Slovak language. Brief outline of the c		
	ourse:	
Brief outline of the c	ourse:	
Brief outline of the c Recommended litera	ourse:	
Brief outline of the c Recommended litera Course language:	ourse: nture:	
Brief outline of the c Recommended litera Course language: Notes: Course assessment	ourse: nture:	
Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	ourse: nture: ssed students: 134	audience using adequate means and through the
Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	ourse: nture: ssed students: 134 abs	audience using adequate means and through the
Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	ourse: nture: ssed students: 134 abs 100.0	audience using adequate means and through the

	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ DKZU/22	Course name: Local Cont	ference with Foreign Participation
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 5	
Recommended seme	ster/trimester of the cours	se:
Course level: III.		
Prerequisities:		
Conditions for cours Active participation i	se completion: in a national conference wit	h foreign participation.
<i>v v</i> 1	0	ce, the PhD student demonstrates a high degree of
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i	valuate, and apply correct s emonstrates the ability to re applying them critically. I innovative way, as well as	ce, the PhD student demonstrates a high degree of cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and nce by adequate means and through Slovak or a
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i communicate researc	valuate, and apply correct s emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audien	cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i communicate researce foreign language.	valuate, and apply correct s emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audien	cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i communicate researc foreign language. Brief outline of the c	valuate, and apply correct s emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audien	cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i communicate researc foreign language. Brief outline of the c Recommended litera	valuate, and apply correct s emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audien	cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i communicate research foreign language. Brief outline of the c Recommended litera Course language:	valuate, and apply correct s emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audien course:	cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i communicate researc foreign language. Brief outline of the c Recommended litera Course language: Notes: Course assessment	valuate, and apply correct s emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audien course:	cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i communicate researc foreign language. Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	valuate, and apply correct s emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier course: ature: ssed students: 41	cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and nce by adequate means and through Slovak or a
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i communicate researc foreign language. Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	valuate, and apply correct s emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier course: ature: ssed students: 41 abs	cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and nce by adequate means and through Slovak or a
By actively participat ability to identify, ev scientific field. He de latest approaches and and concepts in an i communicate researc foreign language. Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asses	valuate, and apply correct s emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier course: ature: ssed students: 41 abs 100.0	cientific methods or research methodology in his effect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and nce by adequate means and through Slovak or a

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ DC/22	Course name: Local Journ	al
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): y period:	
Number of ECTS cr	edits: 6	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Publication accepted	e completion: in a national journal as auth	or/co-author.
level of ability to iden He demonstrates the applying them critica an innovative way, as according to the high	ntify, evaluate, and apply co ability to reflect on a scien lly. He demonstrates the con swell as to generate new or est qualitative and ethical sta	/co-author, the PhD student demonstrates a high rrect scientific methods or research methodology. tific problem by using the latest approaches and mpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates viewers' suggestions, to finalize his own ideas.
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 0	
abs n		
	0.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	

University: P. J. Šafá	rik University in Koši	ce
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ SIG/22	Course name: Mem	per of the internal project team
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 3	
Recommended seme	ester/trimester of the	course:
Course level: III.		
Prerequisities:		
Conditions for cours	1	
Learning outcomes: The PhD student dem	nonstrates the ability to	grant schemes (VVGS) participate in teamwork, to bring his own contribution
Learning outcomes: The PhD student dem to the solution of the the internal VVGS g established procedure and participate in the practical course of the	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project.	
Learning outcomes: The PhD student dent to the solution of the the internal VVGS g established procedure and participate in the practical course of the Brief outline of the c	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project.	participate in teamwork, to bring his own contributivities within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the schedule, coordinate his own activities with colleague
Learning outcomes: The PhD student dent to the solution of the the internal VVGS g established procedure and participate in the practical course of the Brief outline of the construction	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project.	participate in teamwork, to bring his own contributivities within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the schedule, coordinate his own activities with colleague
Learning outcomes: The PhD student dem to the solution of the the internal VVGS g established procedure and participate in the practical course of the Brief outline of the c Recommended litera Course language:	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project.	participate in teamwork, to bring his own contributivities within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the schedule, coordinate his own activities with colleague
Learning outcomes: The PhD student dem to the solution of the the internal VVGS g established procedure and participate in the practical course of the Brief outline of the c Recommended litera Course language: Notes:	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project.	participate in teamwork, to bring his own contributivities within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the schedule, coordinate his own activities with colleague
Learning outcomes: The PhD student dem to the solution of the the internal VVGS g established procedure and participate in the practical course of the Brief outline of the c Recommended litera Course language: Notes:	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project. course: ature:	participate in teamwork, to bring his own contributivities within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the schedule, coordinate his own activities with colleague
Learning outcomes: The PhD student dem to the solution of the the internal VVGS g established procedure and participate in the practical course of the Brief outline of the construction Recommended literation Course language: Notes: Course assessment	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project. course: ature:	participate in teamwork, to bring his own contributivities within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the schedule, coordinate his own activities with colleague
Learning outcomes: The PhD student dem to the solution of the the internal VVGS g established procedure and participate in the practical course of the Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project. course: ature: ssed students: 23	o participate in teamwork, to bring his own contributi- vithin the internal grant system at UPJŠ. By solvi- ability to implement the project plan according to t schedule, coordinate his own activities with colleague The PhD student gains valuable experience from t
Learning outcomes: The PhD student dem to the solution of the the internal VVGS g established procedure and participate in the practical course of the Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project. course: ature: ssed students: 23 abs	participate in teamwork, to bring his own contributivithin the internal grant system at UPJŠ. By solvitability to implement the project plan according to t schedule, coordinate his own activities with colleague. The PhD student gains valuable experience from t
Learning outcomes: The PhD student dem to the solution of the the internal VVGS g established procedure and participate in the practical course of the Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	nonstrates the ability to ne project objective v grant, he acquires the e, adhere to the project e creation of outputs. e grant project. course: ature: ssed students: 23 abs 100.0	participate in teamwork, to bring his own contributivithin the internal grant system at UPJŠ. By solvitability to implement the project plan according to t schedule, coordinate his own activities with colleague. The PhD student gains valuable experience from t

University: P. J. Šafá	rik University in Ko	šice
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ POVK/22	Course name: Me	mbership in a Conference organizing Committee
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 3	
Recommended seme	ster/trimester of th	e course:
Course level: III.		
Prerequisities:		
Conditions for cours Work in the organizir		conference
Learning outcomes: By working in the c	organizing committe	e of the conference, the PhD student demonstrates the
By working in the or abilities and compete to manage the implem in writing using vario level with various typ decisions.	ences to organize a some nentation in terms of sus technical means a ses of people, if neces	ee of the conference, the PhD student demonstrates the cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional asary, correctly recommend solutions or make independent
By working in the or abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the c	ences to organize a some nentation in terms of sus technical means a ses of people, if neces	cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional
By working in the or abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the c Recommended litera	ences to organize a some nentation in terms of sus technical means a ses of people, if neces	cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional
By working in the c abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the c Recommended litera Course language:	ences to organize a some nentation in terms of sus technical means a ses of people, if neces	cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional
By working in the or abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the or Recommended litera Course language: Notes:	ences to organize a some nentation in terms of sus technical means a ses of people, if neces	cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional
By working in the c abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the c Recommended litera Course language:	ences to organize a somentation in terms of ous technical means a ses of people, if neces course:	cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional
By working in the or abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the or Recommended litera Course language: Notes: Course assessment	ences to organize a somentation in terms of ous technical means a ses of people, if neces course:	cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional
By working in the or abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the or Recommended litera Course language: Notes: Course assessment Total number of asses	sed students: 6	cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional asary, correctly recommend solutions or make independent
By working in the or abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the or Recommended litera Course language: Notes: Course assessment Total number of asses	ences to organize a somentation in terms of ous technical means a ses of people, if neces course: nture: ssed students: 6 abs	cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional asary, correctly recommend solutions or make independent
By working in the or abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the or Recommended litera Course language: Notes: Course assessment Total number of asses	ences to organize a somentation in terms of ous technical means a ses of people, if neces course: nture: ssed students: 6 abs 100.0	cientific or professional event independently or in a team, time and content, to communicate effectively verbally and as needed, including in a foreign language at a professional asary, correctly recommend solutions or make independent

	COURSE INFORM	IATION LETTER
University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ MPEP/06	Course name: Methodolog	gy of Experimental Work
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 4	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
and the topic of the st	nar paper on a topic related to udent's doctoral studies. A d ich the student is given the	o the methodical approaches in experimental work iscussion with the examiner about the topic of the opportunity to prove that they possess sufficient
scientific work, the c	reation and verification of se	th a basic understanding of the methodology of cientific theories, the design, implementation and entation of scientific results in biochemistry and
methods of science, chemical sciences, p	ce, the scientific method, sc the construction of scienti problem formulation, the ir	ientific logic, induction and deduction, empirical fic theories, the methodology of biological and nplementation, interpretation and evaluation of siples of creating scientific publications.
and Francis Group, 2	zhak.: Methods for studing r 012.	nucleic acids/drug interaction. CRc Press, Taylor logy, Academic Press, 2001.
Course language: English		
Notes:		
Course assessment Total number of asse	ssed students: 19	
	abs	n

Provides: prof. RNDr. Mária Kožurková, CSc., doc. RNDr. Viktor Víglaský, PhD., prof. RNDr. Erik Sedlák, DrSc., RNDr. Danica Sabolová, PhD., univerzitná docentka, doc. RNDr. Rastislav Varhač, PhD.

Date of last modification: 07.03.2023

Approved: prof. RNDr. Mária Kožurková, CSc.

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚCHV/ MBPS/22	Course name: Mitochondria: biochémia procesov starnutia a neurodegeneratívnych ochorení		
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 4 / 2 Per study period: 56 / 28 Course method: present			
Number of ECTS credits: 10			
Recommended seme	ster/trimester of the course:		
Course level: III.			
Prerequisities:			
C	•		

Conditions for course completion:

Active problem solving; attendance at lectures; an exam.

Learning outcomes:

The main goal of the course is to provide a comprehensive review of up-to-date knowledge of mitochondrial bioenergetics and oxidative stress. The focus is given to the mechanisms of energy generation, characterization of the individual complexes of electron-transport chain, oxidative stress generation, the origin, and characterization of individual reactive species, cellular defense against oxidative stress, as well as the biochemical mechanisms of aging and age-related diseases. The course will allow the students to gain valuable insight into the interplay between mitochondrial bioenergetics, oxidative stress, and pathological processes leading to age and agerelated neurodegenerative diseases.

Brief outline of the course:

1. Oxidative stress - general introduction

On the history of oxidative stress. Theories of aging. The mitochondrial free radical theory of aging. Oxygen. Oxygen and its derivative. Reactive oxygen species (ROS). Free radicals. Sources of ROS. The chemistry of free radicals and non-radical reactive species. Oxidative damage to biomolecules Oxidative nuclear and mitochondrial DNA damage. Lipid peroxidation. Products of lipid peroxidation. Oxidative modifications of proteins.

2. The role of mitochondria in the development of oxidative stress

Introduction in mitochondrial structure and function. Mitochondrial electron transport chain. Monitoring of mitochondrial membrane potential. Description of individual electron transport complexes and their role in oxidative stress. Generation of oxygen radicals and oxidative stress in mitochondria. Initiation of apoptosis in mitochondria.

3. Cellular redox status: free radicals and oxidative stress

Generation and characterization of the reactive species: Singlet Oxygen. Superoxide Radical. Hydrogen Peroxide. Hydroxyl Radical. Peroxyl Radicals. Reactive Nitrogen Species (RNS). The chemistry of free radicals and related "reactive species". How do radicals react? Radical chemistry, thermodynamics and kinetics. Chemistry of biologically important radicals and non-radicals. Detection of free radicals and other reactive species.

4. Oxidative stress in pathogenesis

Neurodegenerative Diseases: Parkinson's and Alzheimer's Diseases. Role of Oxidative Stress in Pathogenesis of AD and PD. Cascades Leading to Dopamine Cell Degeneration. Antioxidants Link in Neurodegenerative Disorders. Cardiovascular Diseases. Hypoxia and Stroke. ROS and Myocardial Infarction. Reproductive Systems Disorders (Male and Female). Autoimmune Diseases Oxidative Stress in Metabolic Disorders/Diseases. Oxidative Stress and Carcinogenesis. Physiological Significance of Oxidative Stress.

5. Managing oxidative stress/targeting ROS

Antioxidant defenses - Definitions and classifications. Mechanism of action of antioxidants Endogenous: Cellular Antioxidant defense System - Exogenous: Essential Trace Elements, Vitamins, Dietary supplements, and their modes of action.

Oxidative stress-scavenging strategies/targeting: endogenous and exogenous - molecular network and modes of actions of antioxidants in transcriptional regulation of ROS and oxidative stress.

6. Detection of free radicals other reactive species

ESR and spin trapping. Detection of superoxide – histochemical method. Detection of nitric oxide. Nitration assay – detection of peroxynitrite. Direct and indirect detection of hydrogen peroxide and singlet oxygen. Lipid peroxidation detection. Analysis of total antioxidant activity.

Recommended literature:

1. B. Halliwell and J.M.C. Gutteridge: Free Radicals in Biology and Medicine, Oxford Science Publications, 2000.

2. M.B. Jackson: Molecular and Cellular Biophysics, Cambridge Univ. Press 2006.

3. R.M.J. Cotterill: Biophysics – An Introduction, J.Wiley & Sons, Ltd. 2002.

4. G. Krauss: Biochemistry of Signal Transduction and Regulation, Wiley/VCH 2003.

5. D. G. Nicholls and S.J Ferguson: Bioenergetics 4, Elsevier, 2013.

6. M. Ramirez-Alvarado, J. W. Kelly, C. M. Dobson: Protein Misfolding Diseases: Current and Emerging Principles and Therapies; 2010 John Wiley & Sons, Inc.

7. L. Montagnier, R. Olivier, C. Pasquier: Oxidative Stress in Cancer, AIDS, and Neurodegenerative Diseases. CRC Press , 2019.

Course language:

Notes:

Course assessment

Total number of assessed students: 0

Ν	Р
0.0	0.0

Provides: MUDr. Andrey Musatov, DrSc., Ing. RNDr. Katarína Šipošová, PhD.

Date of last modification: 22.11.2021

Approved: prof. RNDr. Mária Kožurková, CSc.

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

Course ID: ÚCHV/ **Course name:** Modern Trends in Biotechnology MTB/13

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

Course method: present

Number of ECTS credits: 6

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

Writing the seminar work.

Learning outcomes:

Students will have the latest knowledge and trends in biotechnology.

Brief outline of the course:

Methods, disciplines and the use of biotechnology. The material base for biotechnology. Genetic engineering, cloning, artificial insemination and conventional techniques of plant biotechnology. Biomass - Biotechnology substrate. Biogas. Fermentation processes, cultivation equipment, types of fermenters and mixers. Food Biotechnology: alcoholic fermentation, production of spirits, beer and wine. Production of dairy products, amino acids and vitamins. Manufacture of organic solvents: acetone, butanol, ethanol. Biotechnology in medicine. Production of antibiotics, vaccines and proteins for therapeutic purposes. Wastewater treatment: biological filters, membrane bioreactors, sludge disposal, removal of solid impurities and water disinfection.

Recommended literature:

1. Y.H. Hui, Ph.D, Wai-Kit Nip, Leo M.L. Nollet, PhD, Gopinadhan Paliyath, Ph.D., Benjamin K. Simpson, Food Biochemistry and Food Processing, Wiley-Blackwell, 2006.

2. E. M. T. El-Mansi, C. F. A. Bryce, Arnold L. Demain, A.R. Allman, Fermentation Microbiology and Biotechnology, Second Edition, CRS Press, 2006.

3. Principles of Fermentation Technology, Second Edition, P F Stanbury, S. Hall, A. Whitaker, Elsevier Science Ltd., 1999.

4. J. G. Black, Microbiology (seventh edition), John Wiley & Sons, Inc. 2008.

5. J. E. Smith, Biotechnology (fifth edition), UK, University Press, Cambridge, 2009.

6. W. Bains, Biotechnology from A-Z (third edition), Oxford university Press, 2004.

Course language:

Notes:

Course assessment		
Total number of assessed students: 8		
Ν	Р	
0.0 100.0		
Provides: RNDr. Danica Sabolová, PhD., univerzitná docentka		
Date of last modification: 07.03.2023		
Approved: prof. RNDr. Mária Kožurková, CSc.		

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: ÚCHV/ Course name: Monograph MONB/22				
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:			
Number of ECTS cr	edits: 20			
Recommended seme	ster/trimester of the cour	se:		
Course level: III.				
Prerequisities:				
Conditions for cours Co-author of the mor	-			
evaluate, and apply c to reflect on a scient demonstrates the con as to generate new o qualitative and ethic	orrect scientific methods or ific problem by using the lanpetence to use existing the riginal scientific knowledg al standards of the field.	demonstrates a high level of ability to identify, research methodology. It demonstrates the ability atest approaches and applying them critically. He eories and concepts in an innovative way, as well e, which he can publish according to the highest The doctoral student demonstrates the ability to gestions, to finalize his own ideas.		
Brief outline of the c	ourse:			
Recommended litera	iture:			
Course language:				
Notes:				
Course assessment	ssad students: 0			
Total number of asse	sseu students. 0	abs n		
		n		
		n 0.0		
Provides:	abs			
	abs 0.0			

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚCHV/ MONA/22	Course name: Monogra	ph in a renowned publishing house	
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:		
Number of ECTS cr	edits: 40		
Recommended seme	ster/trimester of the cou	rse:	
Course level: III.			
Prerequisities:			
Conditions for cours Co-author of a mono	e completion: graph in a renowned publi	shing house.	
level of ability to iden He demonstrates the applying them critica in an innovative way publish according to	ntify, evaluate, and apply of ability to reflect on a scient ally. He demonstrates the y, as well as to generate the highest qualitative and	lishing house, the PhD student demonstrates a high correct scientific methods or research methodology. entific problem by using the latest approaches and competence to use existing theories and concepts new original scientific knowledge, which he can l ethical standards of the field. The doctoral student nd respond to reviewers' suggestions, to finalize his	
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of asse	ssed students: 0		
	abs n		
	0.0	0.0	
Provides:			
Date of last modifica	tion: 08.11.2022		

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ NRZ/22	Course name: Non-Review	wed International or National Proceedings
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cr	edits: 2	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours A publication publish		gn or national journal as an author/co-author.
demonstrates the abi methodology. He de approaches and apply and concepts in an in he can publish accord	lity to identify, evaluate, a monstrates the ability to re ving them critically. He dem novative way, as well as to g rding to the highest qualitation	hal journal as an author/co-author, the PhD student and apply correct scientific methods or research flect on a scientific problem by using the latest constrates the competence to use existing theories generate new original scientific knowledge, which tive and ethical standards of the field. The phD wn thoughts in a written speech.
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 20	
	abs	n
	100.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	

	COURSE INFORMATION LETTER
University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚCHV/ NKSF/13	Course name: Nucleic Acids: Structure and Function
Course type, scope a Course type: Lectur Recommended cour Per week: 3 / 1 Per Course method: pre	re / Practice rse-load (hours): study period: 42 / 14
Number of ECTS cr	edits: 6
Recommended seme	ster/trimester of the course:
Course level: III.	
Prerequisities:	
The lecturer conduct (sickness, family reast event of longer-term)	e completion: betures (also by distance learning). ting the lecture/seminar will excuse the justified absence of the student sons, etc.) at a maximum of two lectures/seminars during the semester. In the justified absence (e.g. due to sickness), the student must provide evidence of d course content by means of an agreed substitute; oral examination
•	f the course is to provide studenst of PhD degree the newest trends in the field and biochemistry focused on nucleic acids.

Brief outline of the course:

Cell signaling system. Molecular basis of neoplastic cell transformation leading to development of cancer - oncogenes, tumor suppressing genes, regulatory regions of DNA. Gene mutations and DNA repair mechanisms. Induced pluripotent stem cells. Current trends and advances in the study of nucleic acids, their biological significance in cell metabolism. Gene therapy. Gene editing-CRISPR Cas technology. Gene silencing. The classification of viruses based on genetic material, the effect of physical and chemical factors on viruses. Biochemistry of viruses. Virus replication. Viral oncogenicity. Retroviruses and HIV. Pandemic viruses - Covid, SARS, MERS, Ebola, influenza papillomaviruses. Prions. Aptamers and nanobioconjugates. Molecular basis of the manifestation of genetically determined diseases and their detection and diagnostic.

Recommended literature:

1. B. Alberts, A. Johnson, J. Lewis, M. Raff, K. Roberts, P.: Walter Molecular Biology of the Cell, Garland Science, Fifth edition, New York, NY, 2008.

2. Neidle S.: Cancer Drug Design and Discovery, Academic Press, First edition, 2007.

3. Krauss G.: Biochemistry of Signal Transduction and Regulation, Wiley-VCH Verlag GmbH, Second Edition, 2003.

Course language:

Notes:

Course assessment Total number of assessed students: 9	
N	Р
0.0	100.0
Provides: doc. RNDr. Viktor Víglaský, PhD.	
Date of last modification: 13.03.2023	
Approved: prof. RNDr. Mária Kožurková, CSc.	

University: P. J. Šafái	ik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ PVS/04	Course name: Patents, Inv	entions, Software
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cro	edits: 2	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Patent filed, invention	e completion: n, software product created.	
	onstrates the ability to creat interdisciplinary scale or in	e an innovative product in a given scientific field, technical practice.
Brief outline of the c	ourse:	
Recommended litera	ture:	
Course language:		
Notes:		
Course assessment Total number of asses	sed students: 0	
	abs	n
	0.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	
Approved: prof. RNI	Dr. Mária Kožurková, CSc.	

University: P. J. Šafărik 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. Prerequisities: Conditions for course completion: 1. Development of a teaching diary—100% 2. Compulsory active participation and attendance in accordance with the Study Regulation Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching prouniversity-level professional subjects. Identify and specify educational procedures of a unit teacher aimed at effective teaching management, pedagogical diagnostics, and assessm	
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. Prerequisities: Conditions for course completion: 1. Development of a teaching diary—100% 2. Compulsory active participation and attendance in accordance with the Study Regulation Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching pro university-level professional subjects. Identify and specify educational procedures of a uni teacher aimed at effective teaching management, pedagogical diagnostics, and assessm	
PgVU/17 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. Prerequisities: Conditions for course completion: 1. Development of a teaching diary—100% 2. Compulsory active participation and attendance in accordance with the Study Regulation Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching prouniversity-level professional subjects. Identify and specify educational procedures of a uni teacher aimed at effective teaching management, pedagogical diagnostics, and assessm	
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. Prerequisities: Conditions for course completion: 1. Development of a teaching diary—100% 2. Compulsory active participation and attendance in accordance with the Study Regulation Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching pro- university-level professional subjects. Identify and specify educational procedures of a uni teacher aimed at effective teaching management, pedagogical diagnostics, and assessm	
Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: 1. Development of a teaching diary—100% 2. Compulsory active participation and attendance in accordance with the Study Regulation Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching pro-university-level professional subjects. Identify and specify educational procedures of a unit teacher aimed at effective teaching management, pedagogical diagnostics, and assessment	
Course level: III. Prerequisities: Conditions for course completion: 1. Development of a teaching diary—100% 2. Compulsory active participation and attendance in accordance with the Study Regulation Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching prouniversity-level professional subjects. Identify and specify educational procedures of a unit teacher aimed at effective teaching management, pedagogical diagnostics, and assessminations.	
Prerequisities: Conditions for course completion: 1. Development of a teaching diary—100% 2. Compulsory active participation and attendance in accordance with the Study Regulation Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching prouniversity-level professional subjects. Identify and specify educational procedures of a unit teacher aimed at effective teaching management, pedagogical diagnostics, and assessmed to a sessement.	
Conditions for course completion: 1. Development of a teaching diary—100% 2. Compulsory active participation and attendance in accordance with the Study Regulation Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching pro- university-level professional subjects. Identify and specify educational procedures of a uni- teacher aimed at effective teaching management, pedagogical diagnostics, and assessm	
 Development of a teaching diary—100% Compulsory active participation and attendance in accordance with the Study Regulation Learning outcomes: After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching pro-university-level professional subjects. Identify and specify educational procedures of a unit teacher aimed at effective teaching management, pedagogical diagnostics, and assessment 	
After completing the course, the student will acquire knowledge, skills, and competencies, i. be able to: Knowledge Define and apply basic didactic principles, methods, forms, and tools in the teaching pro- university-level professional subjects. Identify and specify educational procedures of a uni- teacher aimed at effective teaching management, pedagogical diagnostics, and assessme	
learning outcomes. Recognize different approaches to pedagogical evaluation and their implement effective educational process at the university level. Skills Implement effective educational methods and techniques into the teaching of professional su tailored to the needs of university students. Conduct pedagogical diagnostics, assess st progress, and apply appropriate evaluation methods to improve learning outcomes. Analy reflect on one's own teaching process, identify areas for improvement, and enhance the te of professional subjects, including the rationalization of the time and content structure of tea Present specific proposals for improving the teaching process, including the use of new techno and innovative pedagogical approaches. Competencies Confidently and effectively manage the teaching of university subjects, applying educ competencies that consider the specifics of higher education. Critically reflect on one pedagogical practice and the learning outcomes of students to improve teaching metho achieve a higher quality of the educational process. Apply innovative solutions to streamli optimize the teaching process, aiming to increase the engagement and success of university streamling outcomes is process.	iss of ersity nt of ct or jects lents e and ching hing

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:

TUICS.			
Course assessment Total number of assessed students	s: 152		
abs	n	neabs	
98.03 0.66 1.32			
Provides: doc. PaedDr. Renáta Or	rosová, PhD.	<u>.</u>	
Date of last modification: 14.09.	2024		
Approved: prof. RNDr. Mária Ko	žurková, CSc.		

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S		
Course ID: ÚCHV/ FBB/06		and Biochemistry of Rumen Microorganisms
Course type, scope a Course type: Lectur Recommended cour Per week: 4 / 2 Per Course method: pre	re / Practice rse-load (hours): study period: 56 / 28	
Number of ECTS cr	edits: 10	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours	e completion:	
Learning outcomes:		
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 10	
	Ν	Р
0.0 100.0		100.0
Provides: doc. RNDr	. Peter Pristaš, CSc., univerz	ritný profesor
Date of last modifica	tion: 16.11.2021	
Approved: prof. RNI	Dr. Mária Kožurková, CSc.	

University: P. J. Šafár	rik University in Košice		
Faculty: Faculty of So	cience		
Course ID: ÚCHV/ POPV/22	Course name: Popularisat	ion of science	
Course type, scope an Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:		
Number of ECTS cre	edits: 5		
Recommended semes	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours Active involvement in	e completion: n the popularization of scien	nce.	
communication, ident professional knowled	tify the target group and a	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups wider context of science	
Brief outline of the c	ourse:		
Recommended litera	ture:		
Course language:			
Notes:			
Course assessment Total number of asses	ssed students: 37		
	abs	n	
- - -	100.0 0.0		
Duarridaa			
Provides:			
Provides: Date of last modifica	tion: 08.11.2022		

Faculty: Faculty of S	Science	
Course ID: ÚCHV/ VYS/22	Course name: Prese	ntation in Seminar
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 5	
Recommended seme	ester/trimester of the	course:
Course level: III.		
Prerequisities:		
Conditions for cours Presentation at the se		
Learning outcomes: By actively participa		the PhD student demonstrates the ability to identify,
By actively participate evaluate, and apply of demonstrates the abia and applying them cu an innovative way, a research results by ac	ating in the seminar, correct scientific meth lity to reflect on a sp ritically. Demonstrate as well as generating dequate means and the	the PhD student demonstrates the ability to identify, nods or research methodology in his field of study. He ecific scientific problem by using the latest approaches is competence in using existing theories and concepts in new original scientific knowledge and communicating rough Slovak or a foreign language
By actively participate valuate, and apply of demonstrates the abia and applying them on an innovative way, are search results by a Brief outline of the c	ating in the seminar, correct scientific meth lity to reflect on a sp ritically. Demonstrate as well as generating dequate means and the course:	nods or research methodology in his field of study. He ecific scientific problem by using the latest approaches s competence in using existing theories and concepts in new original scientific knowledge and communicating
By actively participate valuate, and apply of demonstrates the abit and applying them critical and innovative way, a research results by a Brief outline of the critical Recommended literate	ating in the seminar, correct scientific meth lity to reflect on a sp ritically. Demonstrate as well as generating dequate means and the course:	nods or research methodology in his field of study. He ecific scientific problem by using the latest approaches s competence in using existing theories and concepts in new original scientific knowledge and communicating
By actively participate valuate, and apply of demonstrates the abia and applying them on an innovative way, a research results by a Brief outline of the c Recommended literate Course language:	ating in the seminar, correct scientific meth lity to reflect on a sp ritically. Demonstrate as well as generating dequate means and the course:	nods or research methodology in his field of study. He ecific scientific problem by using the latest approaches s competence in using existing theories and concepts in new original scientific knowledge and communicating
By actively participate valuate, and apply of demonstrates the abit and applying them critical and innovative way, a research results by a Brief outline of the critical Recommended literate	ating in the seminar, correct scientific meth lity to reflect on a sp ritically. Demonstrate as well as generating dequate means and the course:	nods or research methodology in his field of study. He ecific scientific problem by using the latest approaches s competence in using existing theories and concepts in new original scientific knowledge and communicating
By actively participa evaluate, and apply of demonstrates the abi and applying them cri an innovative way, a research results by ac Brief outline of the c Recommended litera Course language: Notes: Course assessment	ating in the seminar, correct scientific meth lity to reflect on a sp ritically. Demonstrate as well as generating dequate means and the course:	nods or research methodology in his field of study. He ecific scientific problem by using the latest approaches s competence in using existing theories and concepts in new original scientific knowledge and communicating
By actively participa evaluate, and apply of demonstrates the abi and applying them cri an innovative way, a research results by ac Brief outline of the c Recommended litera Course language: Notes: Course assessment	ating in the seminar, correct scientific meth lity to reflect on a sp ritically. Demonstrate as well as generating dequate means and the course: ature:	hods or research methodology in his field of study. He ecific scientific problem by using the latest approaches is competence in using existing theories and concepts in new original scientific knowledge and communicating rough Slovak or a foreign language
By actively participate valuate, and apply of demonstrates the abies and applying them contained applying them contained and applying them con	ating in the seminar, correct scientific meth lity to reflect on a sp ritically. Demonstrate as well as generating dequate means and the course: ature: ssed students: 9 abs	nods or research methodology in his field of study. He ecific scientific problem by using the latest approaches a competence in using existing theories and concepts in new original scientific knowledge and communicating rough Slovak or a foreign language
By actively participa evaluate, and apply of demonstrates the abi and applying them or an innovative way, a research results by ac Brief outline of the of Recommended litera Course language: Notes: Course assessment Total number of asse	ating in the seminar, correct scientific meth lity to reflect on a sp ritically. Demonstrate as well as generating dequate means and the course: ature: ssed students: 9 abs 100.0	nods or research methodology in his field of study. He ecific scientific problem by using the latest approaches a competence in using existing theories and concepts in new original scientific knowledge and communicating rough Slovak or a foreign language

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ ZRIG/22	Course name: Principal in	nvestigator of an internal grant (VVGS)
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 10	
Recommended seme	ester/trimester of the cours	se:
Course level: III.		
Prerequisities:		
Conditions for cours Principal investigator	se completion: r of an internal grant (VVG	S)
problem within the in their time schedule, the internal VVGS g established procedure	ternal grant system at UPJŠ measurable outputs and ade grant acquires the ability to e, to be responsible for achi	cess a successful application for his own research . Acquires skills with the design of research stages, equate distribution of funds. The very solution of implement the project intention according to the eving the set outputs. As a responsible researcher, t management, its administration, and presentation
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 18	
	ssed students: 18 abs	n
Total number of asse		n 0.0
Total number of asse	abs	
Total number of asse	abs 100.0	

	COURSE INFORMATION LETTER
University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	science
Course ID: KPPaPZ/PsVU/17	Course name: Psychology for University Lecturers
Course type, scope a Course type: Lectur Recommended cou Per week: Per stud Course method: dis	re rse-load (hours): ly period: 28s
Number of ECTS cr	redits: 5
Recommended seme	ester/trimester of the course:
Course level: III.	
Prerequisities:	
Conditions for course Case study, micro-ou Current modification	-
summarize and expla motivation psychology health psychology. T for the professional, to create and implem and develop the con the application of ps	the course, students will gain knowledge that allows them to understand, and selected psychological knowledge from cognitive psychology, emotion and gy, personality psychology, developmental, social, educational psychology and they will acquire skills to apply the above psychological knowledge necessary competent performance of university teaching practice of doctoral students ent the teaching of a professional topic with applied psychological knowledge mpetences to create and implement teaching of a professional topic with sychological knowledge, as well as to evaluate their performance and the classmates in the form of constructive feedback.
psychology of emotion psychology and hear interactive, experient of independence, act in the teaching process	course: burse is based on selected psychological knowledge of cognitive psychology, ons and motivation, personality psychology, developmental, social, educational alth psychology. Teaching is realized by a combination of lectures with tial methods, discussion, open communication with mutual respect, support tivity and motivation of students. Syllabus: University teacher and his work ess with a focus on: teachers in relation to themselves (cognitive, personal, cies in the use of methods), in relation to students and as part of the teacher-

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.

student relationship on the basis of selected areas of cognitive psychology, psychology of emotions

Mareš, J.: Pedagogická psychologie. Portál, 2013.

Kniha psychologie. Universum, 2014

Čáp, J., Mareš, J.: Psychologie pro učitele. Praha: Portál 2007.

Vágnerová, M.: Školní poradenská psychológie pro pedagogy. Praha: Karolínum 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, P	hD.	
Date of last modification: 09.12.2	024	
Approved: prof. RNDr. Mária Kož	turková, CSc.	

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ Q1SA/22	Course name: Q1 journal	as co-author
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 30	
Recommended seme	ster/trimester of the cour	se:
Course level: III.		
Prerequisities:		
Conditions for cours Publication accepted	e completion: in a journal of category Q1	as co-author.
degree of ability to id He demonstrates the applying them critica an innovative way, as according to the high	entify, evaluate, and apply c ability to reflect on a scien- lly. He demonstrates the co s well as to generate new on est qualitative and ethical st	a co-author, the PhD student demonstrates a high orrect scientific methods or research methodology. ntific problem by using the latest approaches and ompetence to use existing theories and concepts in riginal scientific knowledge, which he can publish andards of the field. The PhD student demonstrates eviewers' suggestions, to finalize his own ideas.
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 10	
	abs	n
	100.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	

Faculty: Faculty of S		
raculty. Faculty of S	cience	
Course ID: ÚCHV/ Q11A/22	Course name: Q1 journal	as first or corresponding author
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 40	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Publication accepted	1	as first or corresponding author.
or research methodol		y, evaluate, and apply correct scientific methods
theories and concepts which he can publish PhD student demons to finalize his own id	and applying them critically in an innovative way, as wel according to the highest q trates the ability to critically eas	bility to reflect on a scientific problem by using . He demonstrates the competence to use existing Il as to generate new original scientific knowledge, pualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
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University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ Q2SA/22	Course name: Q2 journal	as co-author
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 20	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for course Publication accepted	e completion: in a journal of category Q2	as co-author.
He demonstrates the applying them critica an innovative way, as according to the high	ability to reflect on a scient illy. He demonstrates the cost well as to generate new or est qualitative and ethical sta	brrect scientific methods or research methodology. tific problem by using the latest approaches and mpetence to use existing theories and concepts in iginal scientific knowledge, which he can publish undards of the field. The PhD student demonstrates eviewers' suggestions, to finalize his own ideas.
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:	· · · · · · · · · · · · · · · · · · ·	
Course assessment		
Total number of asse	ssed students: 7	
Total number of asse	abs	n
Total number of asse		n 0.0
Total number of asse	abs	
	abs 100.0	

	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ Q21A/22	Course name: Q2 journal	as first or corresponding author
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 30	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Publication accepted		as first or corresponding author.
	••••	e first or corresponding author, the PhD student
or research methodo the latest approaches theories and concepts which he can publish PhD student demons to finalize his own id	logy. He demonstrates the a and applying them critically in an innovative way, as wel h according to the highest q trates the ability to critically eas.	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
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or research methodo the latest approaches theories and concepts which he can publish PhD student demons to finalize his own id Brief outline of the c Recommended litera	logy. He demonstrates the a and applying them critically in an innovative way, as wel h according to the highest q trates the ability to critically eas.	bility to reflect on a scientific problem by using . He demonstrates the competence to use existing ll as to generate new original scientific knowledge, pualitative and ethical standards of the field. The
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or research methodo the latest approaches theories and concepts which he can publish PhD student demons to finalize his own id Brief outline of the c Recommended litera Course language: Notes:	logy. He demonstrates the a and applying them critically in an innovative way, as wel h according to the highest q trates the ability to critically eas. course: ature: ssed students: 17	bility to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, pualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
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or research methodo the latest approaches theories and concepts which he can publish PhD student demons to finalize his own id Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	logy. He demonstrates the a and applying them critically in an innovative way, as well h according to the highest q trates the ability to critically eas. course: ature: ssed students: 17 abs 100.0	hibility to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, pualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions, n

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ Q3SA/22	Course name: Q3 journal	as co-author
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 15	
Recommended seme	ster/trimester of the cour	se:
Course level: III.		
Prerequisities:		
Conditions for cours Publication accepted	e completion: in a journal of category Q3	as co-author.
degree of ability to id He demonstrates the applying them critica an innovative way, as according to the high	entify, evaluate, and apply c ability to reflect on a scie lly. He demonstrates the co s well as to generate new of est qualitative and ethical st	a co-author, the PhD student demonstrates a high correct scientific methods or research methodology. ntific problem by using the latest approaches and ompetence to use existing theories and concepts in riginal scientific knowledge, which he can publish andards of the field. The PhD student demonstrates eviewers' suggestions, to finalize his own ideas.
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 5	
	abs	n
	100.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	
Dute of fust mounted		

	University in Košice	
Faculty: Faculty of Scie	ence	
Course ID: ÚCHV/ Co Q31A/22	ourse name: Q3 journal a	as first or corresponding author
Course type, scope and Course type: Recommended course Per week: Per study p Course method: presen	-load (hours): period:	
Number of ECTS credi	its: 25	
Recommended semeste	er/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for course c Publication accepted in		as first or corresponding author
demonstrates a high dea or research methodolog the latest approaches and	gree of ability to identify y. He demonstrates the a d applying them critically	e first or corresponding author, the PhD student y, evaluate, and apply correct scientific methods bility to reflect on a scientific problem by using r. He demonstrates the competence to use existing l as to generate new original scientific knowledge,
which he can publish a	tes the ability to critically	ualitative and ethical standards of the field. The valuate and respond to reviewers' suggestions,
which he can publish as PhD student demonstrat	tes the ability to critically 3.	ualitative and ethical standards of the field. The
which he can publish ac PhD student demonstrat to finalize his own ideas	tes the ability to critically s. rse:	ualitative and ethical standards of the field. The
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which he can publish ad PhD student demonstrat to finalize his own ideas Brief outline of the cou Recommended literatu Course language: Notes: Course assessment Total number of assesse ab 100	tes the ability to critically s. rse: re: d students: 4 os 0.0	n

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ Q4SA/22	Course name: Q4 journ	al as co-author
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 10	
Recommended seme	ster/trimester of the cou	rse:
Course level: III.		
Prerequisities:		
Conditions for course Publication accepted	e completion: in a journal of category Q	24 as co-author.
degree of ability to id He demonstrates the applying them critica an innovative way, as according to the high	entify, evaluate, and apply ability to reflect on a sci lly. He demonstrates the s well as to generate new est qualitative and ethical	a co-author, the PhD student demonstrates a high correct scientific methods or research methodology. entific problem by using the latest approaches and competence to use existing theories and concepts in original scientific knowledge, which he can publish standards of the field. The PhD student demonstrates reviewers' suggestions, to finalize his own ideas.
Brief outline of the c	ourse:	
Recommended litera	ature:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 1	
	abs	n
	100.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	

•	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ Q41A/22	Course name: Q4 journal	as first or corresponding author
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 20	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for course Publication accepted	1	as first or corresponding author.
		ie first or corresponding author, the PhD student
demonstrates a high or research methodo the latest approaches theories and concepts which he can publish	degree of ability to identify logy. He demonstrates the a and applying them critically in an innovative way, as well h according to the highest q trates the ability to critically	the first or corresponding author, the PhD student by, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
demonstrates a high or research methodo the latest approaches theories and concepts which he can publish PhD student demons	degree of ability to identify logy. He demonstrates the a and applying them critically in an innovative way, as well h according to the highest q trates the ability to critically eas.	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
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demonstrates a high or research methodo the latest approaches theories and concepts which he can publisl PhD student demons to finalize his own id Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	degree of ability to identify logy. He demonstrates the a and applying them critically in an innovative way, as well h according to the highest q trates the ability to critically leas. course: ature: ssed students: 0 abs 0.0	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,

University: P. J. Š	Safárik University in Košice
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Faculty: Faculty of Science

Course ID: ÚCHV/ **Course name:** Research of Individual Molecules VIM/13

Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours):

Per week: 4 / 2 Per study period: 56 / 28

Course method: present

Number of ECTS credits: 8

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

Examination.

Learning outcomes:

In biological systems, many biopolymers present in small amounts, even as individual molecules. Recently, new methods have been developed to study such systems. The lectures will be given to work regularities of such systems, as well as biochemical and biophysical research methods of individual molecules.

Brief outline of the course:

Biomacromolecules, cells in terms of their individual characteristics. Basic knowledge about the function of lasers and other devices (eg XFEL), suitable for the study of biomacromolecules. GFP protein, dyes - fluorescent probes, nano and microparticles. Atomic force microscopy - AFM, MSM. Microchip electrophoresis and microhydrodynamic devices (MEMS, Lab on a Chip). Super resolution microscopy, two-photon processes, and more. TERS, SERS, Fano resonance. SNOM, fluorescence correlation spectroscopy. GSDM, STED. Storm, FRET, TIRF. Manipulation of individual molecules, cells. Optical tweezers, magnetic tweezers, optical crystals with cavity. Electron microscopy (SEM, TEM), X-ray microscopy. Study of membrane processes, Patch clamp. The electrical conductivity of the molecules, graphene, carbon nanotubes.

Recommended literature:

1. Christoph Zander, Jörg Enderlein, Richard A. Keller Single molecule detection in solution: methods and applications Wiley, 2002.

2. Chris Gell, David Brockwell, D. Alastair Smith, Handbook of single molecule fluorescence spectroscopy, Oxford University Press, 2006.

3. Experimental oriented journal articles:

/ Keir C Neuman & Attila Nagy Single-molecule force spectroscopy: optical tweezers, magnetic tweezers and atomic force microscopy Nature Methods - 5, 491 - 505 (2008)

/ Chirlmin Joo, Hamza Balci, Yuji Ishitsuka,1 Chittanon Buranachai, and Taekjip Ha,

Advances in Single-Molecule Fluorescence Methods for Molecular Biology, Annual Review of Biochemistry 77, 51-76 (2008).

Course language:

Notes:		
Course assessment Total number of assessed students: 3		
N	Р	
0.0	100.0	
Provides: doc. RNDr. Viktor Víglaský, PhD.		
Date of last modification: 13.03.2023		
Approved: prof. RNDr. Mária Kožurková, CSc.		

	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ RZ/22	Course name: Reviewed I	international or Local Proceedings
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	redits: 5	
Recommended seme	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours A publication publish	1	gn or national proceedings as an author/co-author.
demonstrates a high or research methodo	degree of ability to identify	nal journal as an author/co-author, the PhD student y, evaluate, and apply correct scientific methods
theories and concepts which he can publish PhD student demons to finalize his own id	and applying them critically in an innovative way, as we h according to the highest of trates the ability to critically leas	bility to reflect on a scientific problem by using . He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
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theories and concepts which he can publish PhD student demons to finalize his own id Brief outline of the c Recommended litera Course language:	and applying them critically in an innovative way, as we h according to the highest of trates the ability to critically leas course: ature:	7. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
theories and concepts which he can publish PhD student demons to finalize his own id Brief outline of the construction Recommended literat Course language: Notes: Course assessment	and applying them critically in an innovative way, as we h according to the highest of trates the ability to critically leas course: ature:	7. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
theories and concepts which he can publish PhD student demons to finalize his own id Brief outline of the construction Recommended literat Course language: Notes: Course assessment	and applying them critically in an innovative way, as we h according to the highest of trates the ability to critically leas course: ature: ssed students: 87	A. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
theories and concepts which he can publish PhD student demons to finalize his own id Brief outline of the construction Recommended literat Course language: Notes: Course assessment	and applying them critically in an innovative way, as well h according to the highest of trates the ability to critically leas course: ature: ssed students: 87 abs	n
theories and concepts which he can publish PhD student demons to finalize his own id Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	and applying them critically in an innovative way, as well h according to the highest of trates the ability to critically leas course: ature: ssed students: 87 abs 100.0	n

Course ID: ÚCHV/ Course name: SCI Citation SCI/22 Course type, scope and the method: Course type, scope and the method: Course type; Recommended course-load (hours): Per weck: Per study period: Per weck: Per study period: Course nethod: present Number of ECTS credits: 8 Recommended semester/trimester of the course: Course nethod: present Course nethod: present Number of ECTS credits: 8 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: 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 assessment Total number of assessed students: 31 abs n 100.0 0.0 Provides: Date of last modification: 08.11.2022	University: P. J. Šafá	rik University in Košice	
SCI/22 Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present Number of ECTS credits: 8 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: 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: 100.0 0.0 Provides: Date of last modification: 08.11.2022	Faculty: Faculty of Science		
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: Course level: III. Prerequisities: Course completion: Obtained citation registered in SCI or Scopus. Course level: Learning outcomes: Obtaining a citation demonstrates broad and very well-founded scientific knowledge in the research edifield, 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: Course language: Notes: 100.0 0.0 100.0 0.0 0.0 Provides: Date of last modification: 08.11.2022 08.11.2022	Course ID: ÚCHV/ SCI/22	Course name: SCI Citatio	n
Number of ECTS credits: 8 Recommended semester/trimester of the course: Course level: III. Prerequisities: 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 100.0 0.0 Provides: Data Data Data Output Obta Obta Provides:	Course type: Recommended cour Per week: Per stud	rse-load (hours): y period:	
Recommended semester/trimester of the course: Course level: III. Prerequisities: 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: 31 abs n 100.0 0.0 Provides: Date of last modification: 08.11.2022			
Course level: III. Prerequisities: 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: 31 abs n 100.0 0.0 Provides: Date of last modification: 08.11.2022			
Prerequisities: 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: 31 abs n 100.0 0.0 Provides: Date of last modification: 08.11.2022		ster/trimester of the cours	e:
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: 31 abs n 100.0 0.0 Provides: Date of last modification: 08.11.2022			
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: 31 abs n 100.0 0.0 Provides: Date of last modification: 08.11.2022	Prerequisities:		
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: 31 abs n 100.0 0.0 Provides: Date of last modification: 08.11.2022		-	
Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 31 abs 100.0 0.0 Provides: Date of last modification: 08.11.2022	Obtaining a citation researched field, bas problem in such a wa source demonstrates	ed on the ability to formul ay that generates new know the competence to comm	ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significant
Course language: Notes: Course assessment Total number of assessed students: 31 abs n 100.0 0.0 Provides: Date of last modification: 08.11.2022	Brief outline of the course:		
Notes:	Recommended literature:		
Course assessment Total number of assessed students: 31 abs n 100.0 0.0 Provides: Date of last modification: 08.11.2022	Course language:		
Total number of assessed students: 31 abs n 100.0 0.0 Provides:	Notes:		
100.0 0.0 Provides:	Course assessment Total number of asses	ssed students: 31	
Provides: Date of last modification: 08.11.2022		abs	n
Date of last modification: 08.11.2022		100.0	0.0
	Provides:		
	Date of last modifica	tion: 08.11.2022	
Approved: prof. RNDr. Mária Kožurková, CSc.	Approved: prof. RNI	Dr. Mária Kožurková, CSc.	

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ VPZ/22	Course name: Scientific w	vork after sending to the editorial office
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 5	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Scientific work after		ffice as an author/co-author.
demonstrates a high or research methodo the latest approaches theories and concepts which he can publish	degree of ability to identify logy. He demonstrates the a and applying them critically in an innovative way, as well according to the highest q	fic journal as an author/co-author, the PhD student y, evaluate, and apply correct scientific methods ibility to reflect on a scientific problem by using y. He demonstrates the competence to use existing l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The e his own ideas in a structured form.
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment		
Total number of asse	ssed students: 4	
	abs	n
Total number of asse		n 0.0
Total number of asse	abs	
Total number of asse	abs 100.0	

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

Course ID: ÚCHV/ **Course name:** Selected Topics in Biochemistry of Microorganisms VKBM/13

Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours):

Per week: 4 / 2 Per study period: 56 / 28

Course method: present

Number of ECTS credits: 8

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

Elaboration of a seminar paper on a topic related to the subject biochemistry of microorganism and the topic of the student's doctoral studies. A discussion with the examiner about the topic of the seminar work, in which the student is given the opportunity to prove that they possess sufficient knowledge of the subject.

Learning outcomes:

Familiarize postgraduate students with newest knowledge from Biochemistry of microorganism.

Brief outline of the course:

Diversity of microbial world – microbial evolution, taxonomy and diversity.

Ecology and symbiosis – Biogeochemical cycling and introductory microbial ecology, microbial interactions.

Antimicrobial chemotherapy – development of chemotherapy, general characteristics of antimicrobial drugs, determining the level of antimicrobial activity, antibacterial drugs, factor influencing antimicrobial drug effectiveness, drug resistance, antifungal, antiviral and antiprotozoal drugs.

Food and industrial microbiology – microbiology of food, food-borne pathogens.

Applied and industrial microbiology – microorganisms used in industrial microbiology, major products of industrial microbiology.

Recommended literature:

1. Black, J. G.: Microbiology, Wiley & Sons, Inc., 2008.

2. Johnson, T. R., Case, J.: Laboratory Experiments in Microbiology, 9th Ed., Pearson, 2010.

3. Kayser, F. H., Bienz, K. A., Eckert, J., Zinkernagel, R. M.: Medical Microbiology, Thieme, Stitgart-New York, 2001.

4. Levinson, W.: Review of Medical Microbiology and Immunology, McGraw-Hill International Edition, 2010.

5. Willey, J. M., Sherwood, L. M., Woolverton, C. J.: Prescott, Harley, and Klein's Microbiology, McGraw-Hill International Edition, 2008.

Course language:

English

Notes:

Teaching is carried out either face-to-face or remotely/hybrid learning using the MS Teams program. The teaching format is specified by the teacher at the beginning of the semester and updated continuously.

Course assessment	
Total number of assessed students: 15	
Ν	Р
0.0	100.0
Provides: prof. RNDr. Mária Kožurková, CSc.	
Date of last modification: 07.03.2023	
Approved: prof. RNDr. Mária Kožurková, CSc.	

	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ VKB/06	Course name: Selected To	pics in Biochemistry
Course type, scope a Course type: Lectur Recommended cou Per week: 4 / 2 Per Course method: pro	re / Practice rse-load (hours): study period: 56 / 28	
Number of ECTS cr	redits: 10	
Recommended seme	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
studies. A discussion	nar paper on a topic related to with the examiner about the	o the subject and the topic of the student's doctoral e topic of the seminar work, in which the student s sufficient knowledge of the subject.
Learning outcomes: Acquainting doctoral	students with the most up-t	o-date findings in biochemistry.
Brief outline of the c Biomacromolecular		and with his manufacture new ly identified
types of biologically	active substances, proteom	gands with biomacromolecules, newly identified ics, mechanisms of enzyme action, new findings exes, metabolites, hormonal processes, molecular
types of biologically in metabolism, apopt	active substances, proteomicosis, supramolecular completics.	ics, mechanisms of enzyme action, new findings
types of biologically in metabolism, apopt physiology, bioenerg Recommended litera	active substances, proteomicosis, supramolecular completics.	ics, mechanisms of enzyme action, new findings
types of biologically in metabolism, apopt physiology, bioenerg Recommended litera Latest articles from s Course language:	active substances, proteomicosis, supramolecular completics.	ics, mechanisms of enzyme action, new findings
types of biologically in metabolism, apopt physiology, bioenerg Recommended litera Latest articles from s Course language: English	active substances, proteomi osis, supramolecular comple- etics. ature: cientific journals.	ics, mechanisms of enzyme action, new findings
types of biologically in metabolism, apopt physiology, bioenerg Recommended litera Latest articles from s Course language: English Notes: Course assessment	active substances, proteomi osis, supramolecular comple- etics. ature: cientific journals.	ics, mechanisms of enzyme action, new findings
types of biologically in metabolism, apopt physiology, bioenerg Recommended litera Latest articles from s Course language: English Notes: Course assessment	active substances, proteomi osis, supramolecular comple- etics. ature: acientific journals. ssed students: 43	ics, mechanisms of enzyme action, new findings exes, metabolites, hormonal processes, molecular
types of biologically in metabolism, apopt physiology, bioenerg Recommended litera Latest articles from s Course language: English Notes: Course assessment Total number of asse	active substances, proteomi osis, supramolecular comple- etics. ature: scientific journals. ssed students: 43	P
types of biologically in metabolism, apopt physiology, bioenerg Recommended litera Latest articles from s Course language: English Notes: Course assessment Total number of asse	active substances, proteomi osis, supramolecular comple- etics. ature: scientific journals. ssed students: 43 N 0.0 r. Mária Kožurková, CSc.	P

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ VKBMB/04	Course name: Selected To	pics in Biochemistry and Molecular Biology
Course type, scope a Course type: Lectu Recommended cou Per week: 2 / 2 Per Course method: pro	re / Practice rse-load (hours): study period: 28 / 28	
Number of ECTS cr	edits: 8	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours	se completion:	
Learning outcomes:		
Brief outline of the o	ourse:	
Recommended litera	ature:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 42	
	Ν	Р
0.0 100.0		
Provides:		
Date of last modifica	ntion: 18.11.2021	
Approved: prof. RN	Dr. Mária Kožurková, CSc.	

Faculty: Faculty of Science

Course ID: Dek. PF	Course name: Spring School for PhD Students
UPJŠ/JSD/14	

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.

Prerequisities:

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

100.0 0.0	abs	n
	100.0	0.0

Provides: doc. RNDr. Marián Kireš, PhD.

Date of last modification: 08.11.2022

Approved: prof. RNDr. Mária Kožurková, CSc.

University: P. J. Šafárik University in Košic	
	e
Faculty: Faculty of Science	
Course ID: ÚCHV/ Course name: Superv VPSV/22	vision of a Students 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 c	course:
Course level: III.	
Prerequisities:	
	r ŠVOČ, the PhD student demonstrates broad and study, as well as knowledge of a wide range of methods
and approaches. Demonstrates the ability to c	critically assess a professional problem and its proposed ly propose another solution. He applies knowledge and
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 6	
abs	n
100.0	0.0
Provides:	
Date of last modification: 08.11.2022	
Approved: prof. RNDr. Mária Kožurková, C	 CSc.

	rik University in Ko	SILE
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ PPC1/22	Course name: Tea	ching activities 1 h/s
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 2	
Recommended seme	ster/trimester of th	e course:
Course level: III.		
Prerequisities:		
Conditions for course Direct teaching activ	1	
	•	tudent demonstrates the ability to transfer and integrate
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c	s own field of stuc strategies of study Ie is capable of des urrent trends in high digital competencies	ly into education. He is able to select and apply the group management, higher education and evaluation of igning and implementing part of the educational process her education and the requirements placed on the level of
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c	s own field of stud strategies of study He is capable of des urrent trends in high digital competencies	ly into education. He is able to select and apply the group management, higher education and evaluation of igning and implementing part of the educational process her education and the requirements placed on the level of
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Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and o Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	s own field of stud strategies of study He is capable of des urrent trends in high digital competencies course: ature: ssed students: 12 abs 100.0	hy into education. He is able to select and apply the group management, higher education and evaluation of igning and implementing part of the educational process her education and the requirements placed on the level of .

	rik University in Ko	išice
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ PPC2/22	Course name: Tea	ching activities 2 h/s
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	redits: 4	
Recommended seme	ester/trimester of th	e course:
Course level: III.		
Prerequisities:		
Conditions for course Direct teaching activ	-	
Learning outcomes: Through pedagogica	l activity, the PhD	student demonstrates the ability to transfer and integrate
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c	s own field of stud strategies of study He is capable of des urrent trends in high digital competencies	ly into education. He is able to select and apply the group management, higher education and evaluation of igning and implementing part of the educational process her education and the requirements placed on the level of
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c	s own field of study strategies of study He is capable of des urrent trends in high digital competencies	ly into education. He is able to select and apply the group management, higher education and evaluation of igning and implementing part of the educational process her education and the requirements placed on the level of
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Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and o Brief outline of the c Recommended litera Course language:	s own field of study strategies of study He is capable of des urrent trends in high digital competencies	ly into education. He is able to select and apply the group management, higher education and evaluation of igning and implementing part of the educational process her education and the requirements placed on the level of
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Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera Course language: Notes: Course assessment	s own field of study strategies of study He is capable of des urrent trends in high digital competencies course: ature: ssed students: 17 abs	hy into education. He is able to select and apply the group management, higher education and evaluation of igning and implementing part of the educational process her education and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and o Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	s own field of study strategies of study He is capable of des urrent trends in high digital competencies course: ature: ssed students: 17 abs 100.0	hy into education. He is able to select and apply the group management, higher education and evaluation of igning and implementing part of the educational process her education and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the requirements placed on the level of the ducation and the

Chirolologe 1. C. Sala	rik University in Ko	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ Course name: Teaching activities 3 h/s PPC3/22		
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 6	
Recommended seme	ster/trimester of th	e course:
Course level: III.		
Prerequisities:		
Conditions for cours Direct teaching activ	1	
Learning outcomes:		udent demonstrates the ability to transfer and integrate
Learning outcomes: Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c	l activity, the PhD s s own field of stud strategies of study He is capable of desi urrent trends in high digital competencies.	tudent demonstrates the ability to transfer and integrate y into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process er education and the requirements placed on the level of
Learning outcomes: Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c	l activity, the PhD s s own field of study strategies of study He is capable of desi urrent trends in high digital competencies.	y into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process er education and the requirements placed on the level of
Learning outcomes: Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera	l activity, the PhD s s own field of study strategies of study He is capable of desi urrent trends in high digital competencies.	y into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process er education and the requirements placed on the level of
Learning outcomes: Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera Course language:	l activity, the PhD s s own field of study strategies of study He is capable of desi urrent trends in high digital competencies.	y into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process er education and the requirements placed on the level of
Learning outcomes: Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera	l activity, the PhD s s own field of study strategies of study He is capable of desi urrent trends in high digital competencies. course:	y into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process er education and the requirements placed on the level of
Learning outcomes: Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera Course language: Notes: Course assessment	l activity, the PhD s s own field of study strategies of study He is capable of desi urrent trends in high digital competencies. course:	y into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process er education and the requirements placed on the level of
Learning outcomes: Through pedagogica knowledge from his right techniques and learning outcomes. F in accordance with c communication and c Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	l activity, the PhD s s own field of study strategies of study He is capable of desi urrent trends in high digital competencies. course: ature: ssed students: 5	y into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process er education and the requirements placed on the level of
Learning outcomes: Through pedagogica knowledge from his right techniques and learning outcomes. F in accordance with c communication and c Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	l activity, the PhD s s own field of study strategies of study He is capable of desi urrent trends in high digital competencies. course: ature: ssed students: 5 abs	y into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process er education and the requirements placed on the level of
Learning outcomes: Through pedagogica knowledge from his right techniques and learning outcomes. F in accordance with c communication and c Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	l activity, the PhD s s own field of study strategies of study He is capable of desi urrent trends in high digital competencies. course: ature: ssed students: 5 abs 100.0	y into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process er education and the requirements placed on the level of

	rik University in Koši	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ PPC4/22	Course name: Teach	ning activities 4 h/s
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	redits: 8	
Recommended seme	ester/trimester of the	course:
Course level: III.		
Prerequisities:		
Conditions for cours Direct teaching activ	-	
Learning outcomes: Through pedagogica	l activity the PhD st	ident demonstrates the ability to transfer and integrate
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c	s own field of study strategies of study g He is capable of desig urrent trends in higher digital competencies	ident demonstrates the ability to transfer and integrate into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process r education and the requirements placed on the level of
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c	s own field of study strategies of study g He is capable of desig urrent trends in higher digital competencies	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera	s own field of study strategies of study g He is capable of desig urrent trends in higher digital competencies	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera Course language:	s own field of study strategies of study g He is capable of desig urrent trends in higher digital competencies	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera	s own field of study strategies of study g He is capable of desig urrent trends in higher digital competencies course:	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera Course language: Notes: Course assessment	s own field of study strategies of study g He is capable of desig urrent trends in higher digital competencies course:	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	s own field of study strategies of study g He is capable of desig urrent trends in higher digital competencies course: ature: ssed students: 12	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process r education and the requirements placed on the level of
Through pedagogica knowledge from his right techniques and learning outcomes. F in accordance with c communication and c Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	s own field of study strategies of study g He is capable of desig urrent trends in higher digital competencies course: ature: ssed students: 12 abs	n
Through pedagogica knowledge from his right techniques and learning outcomes. H in accordance with c communication and c Brief outline of the c Recommended litera Course language: Notes: Course assessment Total number of asse	s own field of study strategies of study g He is capable of desig urrent trends in higher digital competencies course: ature: ssed students: 12 abs 100.0	n

University: P. J. Šafár	ik University in Košice		
Faculty: Faculty of So	cience		
Course ID: ÚCHV/ KZP/22	Course name: Thesis con	sultant	
Course type, scope an Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:		
Number of ECTS cre	edits: 4		
Recommended semes	ster/trimester of the cours	se:	_
Course level: III.			
Prerequisities:			
Conditions for cours Final thesis consultan	-		
knowledge in the field Demonstrates the abi well as to evaluate it a the field of pedagogic	d of study, as well as knowl lity to critically assess a pr and possibly propose anoth al sciences to his own field	ent demonstrates broad and sci edge of a wide range of methods rofessional problem and its prop er solution. He applies knowledg	s and approaches.
Brief outline of the course:			
Recommended litera	ture:		
Course language:			
Notes:			_
Course assessment Total number of asses	sed students: 46	1	
abs n			
	100.0	0.0	
Provides:			
Date of last modifica	tion: 08.11.2022		
Approved: prof. RNE			

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚCHV/ VZP/22	Course name: Thesis supe	ervising	
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): ly period:		
Number of ECTS cr	edits: 8		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours Supervisor of the fina	-		
knowledge in the fiel Demonstrates the abi well as to evaluate it the field of pedagogie	d of study, as well as knowl ality to critically assess a pr and possibly propose anothe cal sciences to his own field	ent demonstrates broad and scientifically based edge of a wide range of methods and approaches. ofessional problem and its proposed solution, as er solution. He applies knowledge and skills from	
Brief outline of the c			
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of asse	ssed students: 2		
abs n		n	
		100.0 0.0	
		0.0	
Provides:		0.0	
Provides: Date of last modifica	100.0	0.0	

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚCHV/ TBFC/04	Course name: Trends in Biophysical Chemistry
Course type, scope a Course type: Lectur Recommended cour Per week: 4/2 Per Course method: pre	e / Practice rse-load (hours): study period: 56 / 28
Number of ECTS cr	edits: 10
Recommended seme	ster/trimester of the course:
Course level: III.	
Prerequisities:	
Conditions for cours	e completion:
Learning outcomes:	
Communications, che Biomimetic materials Modern biophys.cher Modern biophys. Met	f biological systems logical systems m es al systems of morphogenesis, signal transductions emotaxis n methods and devices thods and devices
Voet, D. Voet, J.G. Bic	el,P.R Biophysical Chemistry, W.H. Freeman and Co., S. Francisco,1980 chemistry, John Willey @Sons, 1990 W. Curtis Johnson, P. Shing Ho: Principles of Physical Biochemistry,
Course language:	
Notes:	

Course assessment Total number of assessed students: 35	
N	Р
0.0	100.0
Provides: doc. RNDr. Rastislav Varhač, PhD.	
Date of last modification: 18.11.2021	
Approved: prof. RNDr. Mária Kožurková, CSc.	

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ PUI/06	Course name: Work with I	Literar Data from Internet
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	r se-load (hours): y period: esent	
Number of ECTS cr		
	ster/trimester of the cours	
Course level: III.		
Prerequisities:		
Conditions for cours	e completion:	
Learning outcomes:		
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asses	ssed students: 38	
abs n		
100.0 0.0		
Provides:		
Date of last modifica	tion:	
Approved: prof. RNI	Dr. Mária Kožurková, CSc.	

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚCHV/ Course name: Writing Dissertation Work PDS/22		
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cr	edits: 20	
Recommended seme	ster/trimester of the cours	Se:
Course level: III.		
Prerequisities:		
regulations, preparati Learning outcomes: The PhD student dem the conditions prescr	d number of credits in the pr on and defense of the thesis onstrated the prerequisites f	rescribed composition according to the UPJŠ study , successfully completed dissertation examination. For successful continuation of the study by fulfilling hs for the study and scientific part of the doctoral
Brief outline of the c	ourse:	
Recommended litera	ture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 12	-
	N P	
	0.0	100.0
Provides:		
Date of last modifica	tion: 08.11.2022	