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| | |

| University: P. J. Šafárik University in Košice | | | |
|--|--|--------|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ COK/22 | ID: ÚCHV/ Course name: Certified training course | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 4 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Completion of a certi | e completion: fied professional/training co | ourse. | |
| Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capabilities of scientific work and familiarizes himself with the methodologies of making scientific knowledge available. He confronts his own knowledge and skills with other course participants, develops the abilities of peer discussion in the given scientific field. | | | |
| Brief outline of the course: | | | |
| Recommended litera | iture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 0 | | | |
| | abs | n | |
| | 0.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafán | ik University in Košice |
|-------------------------|-------------------------|
|-------------------------|-------------------------|

Faculty: Faculty of Science

| Course ID: ÚCHV/ | Course name: Chiral auxiliaries & ligands |
|------------------|--|
| CPC/04 | |

Course type, scope and the method:

Course type: Lecture / Practice

Recommended course-load (hours):

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

Course method: present

Number of ECTS credits: 8

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

Student must active work during semester (seminar written discussion).

The terminal examination consists of written and oral part.

Terminal examination by written form and oral presentation of the resolved synthetic problems, followed by subsequent discussion with the examiner.

The witten part is evaluated as follows: 100-91% of points = A, 90-81% of points = B, 80-71% of points = C, 70-61% = D, 60-51% of points = E, 50% and less = FX.

The final evaluation is based on combination of the obtained results from both parts.

Learning outcomes:

The general review on chiral auxiliaries and ligands and their application in asymmetric synthesis. After completing the subject, the doctoral student can combine the latest knowledge in the field of chiral auxiliary agents and ligands to solve a synthetic problem in order to obtain a solution with significant added value. He has knowledge of modern asymmetric synthesis and catalysis, which he can apply in solving given synthetic problems.

Brief outline of the course:

Enantiomerically pure chiral auxiliaries (alcohols, diols, diphenols, amines, diamines, hydrazines, amonoalcohols, amino acids, oxazolidinones, thiazolidinones, aldehydes, ketones, lactams,) Chiral reagents (chiral proton donors, chiral bases, alumínium and boron hydrides). Chiral catalysis and catalysts bearing chiral ligands (aminoalcohols, amino acids, crown ethers, Lewis acids, transition metal catalysts). Asymmetric deprotonations and protonations. Alkylations and related reactions. Additions to C=O and C=N double bond (reductions by hydrides and boranes). Additions to carbon-carbon double bonds (reductions by hydrides, hydroboration, dihydroxylation, epoxidation), Sigmatropic rearrangements (thermal and catalyzed).

Recommended literature:

1. J. Seyden-Penne: Chiral auxiliaries and ligands in asymmetric synthesis, John Wiley & Sons, 2005.

2. M. Christmann, S. Brase.: Asymmetric synthesis II: More methods and Applications, 2012 Wiley#VCH Verlag GmbH & Co. KGaA 2012, ISBN:9783527329212. Online ISBN:9783527652235.

Course language: anglický Notes: Teaching is carried out in person or, if necessary, online, using the MS Teams tool. The form of teaching is specified by the teacher at the beginning of the semester, updated continuously. Course assessment Total number of assessed students: 35 N P 0.0 100.0 Provides: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka Date of last modification: 04.08.2022 Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka

| University: P. J. Šafárik University in Košice | | | |
|--|--|-----|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ CZC/22 | ie ID: ÚCHV/ Course name: Citation in the International Scientific Journal | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 4 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Obtained citation in a | e completion: a foreign scientific journal. | | |
| Learning outcomes: Obtaining a citation demonstrates broad and very well-founded scientific knowledge in the researched field, based on the ability to formulate research questions, to reflect on a scientific problem in such a way that generates new knowledge. At the same time, a citation in an indexed source demonstrates the competence to communicate new knowledge, which is a significant contribution to scientific knowledge, at the highest expert level | | | |
| Brief outline of the course: | | | |
| Recommended litera | iture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 7 | | | |
| | abs | n | |
| | 100.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|---|-----|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ CDC/22 | ID: ÚCHV/ Course name: Citation in the Local Scientific Journal | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 2 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Citation in a national | e completion: scientific journal | | |
| Learning outcomes: Obtaining a citation demonstrates broad and very well-founded scientific knowledge in the researched field, based on the ability to formulate research questions, to reflect on a scientific problem in such a way that generates new knowledge. At the same time, a citation in an indexed source demonstrates the competence to communicate new knowledge, which is a significant contribution to scientific knowledge, at the highest expert level | | | |
| Brief outline of the course: | | | |
| Recommended litera | ature: | | |
| Course language: | Course language: | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 0 | | | |
| | abs | n | |
| | 0.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|--|-----|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ CM/22 | ourse ID: ÚCHV/ Course name: Citation in the Monograph M/22 | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 8 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Obtained citation reg | e completion: istered 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 litera | ature: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 0 | | | |
| | abs | n | |
| | 0.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| Faculty: Faculty of Science | | |
|--|--|--|
| urse ID: ÚCHV/ Course name: Co-investigator of the applied research project AV/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: 5 | | |
| Recommended semester/trimester of the course: | | |
| Course level: III. | | |
| Prerequisities: | | |
| Conditions for course completion: Co-investigator of the applied research project | | |
| Learning outcomes: The PhD student demonstrates the ability to participate in teamwork, to bring his own contribution to the solution of the project objective of applied research and to take responsibility for assigned tasks. By solving an applied research project, he acquires the ability to implement the project objective according to the established procedure, to follow the project schedule, to coordinate his own activities with colleagues, to participate in the creation of applied research outputs. The PhD student gains valuable experience from the practical course of a grant project with a focus on applied research. | | |
| Brief outline of the course: | | |
| Recommended literature: | | |
| Course language: | | |
| Notes: | | |
| Course assessment Total number of assessed students: 0 | | |
| abs n | | |
| 0.0 0.0 | | |
| Provides: | | |
| Date of last modification: 08.11.2022 | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |

| University: P. J. Šafárik University in Košice | | | |
|--|--|-----|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ SDP/22 | V/ Course name: Co-worker of a Local Project | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 10 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Co-investigator of the | e completion: e domestic project | | |
| Learning outcomes: The PhD student demonstrates the ability to participate in teamwork, to bring his own contribution to the solution of the project objective and to take responsibility for the assigned tasks. By solving the domestic project, he acquires the ability to implement the project intention according to the established procedure, to follow the project schedule, to coordinate his own activities with colleagues, to participate in the creation of outputs. The PhD student gains valuable experience from the practical course of the grant project. | | | |
| Brief outline of the course: | | | |
| Recommended litera | ature: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 37 | | | |
| | abs | n | |
| | 100.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
| | | | |

| University: P. J. Šafárik University in Košice | | | |
|--|---|---------------|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Course na SMPR/04 | e ID: ÚCHV/ Course name: Co-worker of an International Project /04 | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS credits: 15 | | | |
| Recommended semester/trimes | ter of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion Membership in the research team |)n: 1 of an internatio | onal project. | |
| Learning outcomes: Active involvement by solving a specific task within a team of international project solvers. The PhD student demonstrates the ability to work in a team, take responsibility for the assigned task, adhere to the time schedule and fulfill the project outputs. The PhD student gains personal experience from the implementation of an international project, participation in its key stages, creation of measurable outputs, grant funding of science. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 42 | | | |
| abs | | n | |
| 100.0 | | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

Faculty: Faculty of Science

| Course ID: ÚCHV/ | Course name: Current topics in organic chemistry |
|------------------|--|
| POCE/04 | |

Course type, scope and the method:

Course type: Lecture / Practice

Recommended course-load (hours):

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

Course method: present

Number of ECTS credits: 8

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

A student must actively work during semester (seminar written discussion).

The terminal examination consists of written and oral part.

Terminal examination by written form and oral presentation of the resolved synthetic problems, followed by subsequent discussion with the examiner.

The witten part is evaluated as follows: 100-91% of points = A, 90-81% of points = B, 80-71% of points = C, 70-61% = D, 60-51% of points = E, 50% and less = FX.

The final evaluation is based on the combination of the obtained results from both parts.

Learning outcomes:

The modern view of the several important chapters of the advanced organic chemistry. New trends in the organic synthesis.

Brief outline of the course:

Delocalisation and conjugation, delocalized bonds, reaction intermediates, base and acid, effect on equilibria. Electrophilic and nucleophilic aromatic substitution, addition to C=C and C=Heteroatom bonds, elimination reaction, rearrangements, oxidations and reductions. Nucleophillic substitution at saturated carbon (compounds bearing the carbon-heteroatom bond).

Formations and reactions of enols and enolates. Reactivity of enolates, alkylation of enolates conjugate addition of enolates. Acylation of carbon. Nucleophilic substitution at C=O with loss of carbonyl oxygen. Using organometallic reagents to make C-C bonds. Pericyclic reactions. Cycloaditions and their stereochemical course. Diels-Alder reactions with the normal and reverse electron demands. Sigmatropic rearrangements and their selectivity. Aza-Claisn rearrangements and their application in the costruction of the more complex products. Chemistry of the coupling reactions and their application in organic synthesis. Protective groups in organic synthesis.

Recommended literature:

1. Michael B. Smith, Jerry March: March's Advanced Organic Chemistry: Reactions,

Mechanisms, and Structure, 7th Edition, 2013.

2. J. Clayden, N. Greeves, S. Warren, P. Wothers Organic Chemistry, Oxford University Press, NY 2012.

Course language:

anglický

Notes:

Teaching is carried out in person or, if necessary, online, using the MS Teams tool. The form of teaching is specified by the teacher at the beginning of the semester, updated continuously.

Course assessment

Total number of assessed students: 39

| Ν | Р |
|--|-------|
| 0.0 | 100.0 |
| Provides: RNDr. Slávka Hamul'aková, PhD., univerzitná docentka | |

Date of last modification: 20.11.2021

Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka

| University: P. J. Šafár | rik University in Košice | | | |
|--|--|-------|--|--|
| Faculty: Faculty of Science | | | | |
| Course ID: ÚCHV/ ODZP/2014/15 | Course ID: ÚCHV/ Course name: Defence of Doctoral Thesis | | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | | |
| Number of ECTS cro | edits: 30 | | | |
| Recommended seme | ster/trimester of the cours | e: | | |
| Course level: III. | | | | |
| Prerequisities: | | | | |
| Conditions for course completion: The Dissertation thesis is the result of the student's own scientific research. It must not show elements of academic fraud and must meet the criteria of correct research practice defined in the Rector's Decision no. 21/2021, which lays down the rules for assessing plagiarism at Pavel Jozef Šafárik University in Košice and its constituents. Fulfillment of the criteria is verified mainly in the process of supervising and in the process of the thesis defense. Failure to do so is grounds for disciplinary action. | | | | |
| Learning outcomes: The Dissertation thesis has elements of a scientific work and the student demonstrates extensive mastery of the theory and professional terminology of the field of study, acquisition of knowledge, skills and competences in accordance with the declared profile of the graduate of the field of study, as well as the ability to apply them in an original way in solving selected problems of the field of study. The student demonstrates the ability of independent scientific work in terms of content, formal and ethical aspects. Further details of the Dissertation thesis are determined by Directive no. 1/2011 on the essential prerequisites of final theses and by the Study Rules of Procedure at UPJŠ in Košice for doctoral studies. The doctoral student demonstrated the ability and readiness for independent scientific and creative activity in the field of study of philology in accordance with the expectations of the relevant qualification framework and the profile of the graduate. | | | | |
| Brief outline of the course: | | | | |
| Recommended literature: | | | | |
| Course language: | | | | |
| Notes: | | | | |
| Course assessment Total number of assessed students: 69 | | | | |
| | N | Р | | |
| | 0.0 | 100.0 | | |

Provides:

Date of last modification: 08.11.2022

Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka

| University: P. J. Šafárik University in Košice | | | | |
|---|---|---|--|--|
| Faculty: Faculty of Science | | | | |
| Course ID: ÚCHV/ VPZP/22 | Course name: Elaboration of reviewer report | | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | | |
| Number of ECTS cr | edits: 3 | | | |
| Recommended seme | ster/trimester of the cours | e: | | |
| Course level: III. | | | | |
| Prerequisities: | | | | |
| Conditions for cours Elaboration of review | e completion: ver report | | | |
| The PhD student der well as knowledge of assess a professional recommend another sciences to his own f | nonstrates broad and scienti a wide range of methods and problem and its proposed solution. He applies know ield. | fically based knowledge in the field of study, as approaches. Demonstrates the ability to critically solution, as well as to evaluate it and possibly ledge and skills from the field of pedagogical | | |
| Brief outline of the course: | | | | |
| Recommended litera | iture: | | | |
| Course language: | Course language: | | | |
| Notes: | Notes: | | | |
| Course assessment Total number of assessed students: 0 | | | | |
| | abs | n | | |
| | 0.0 0.0 | | | |
| Provides: | | | | |
| Date of last modification: 08.11.2022 | | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | | |
| | | | | |

| University: P. J. Šafá | rik University in Košice | |
|---|--|--|
| Faculty: Faculty of Science | | |
| Course ID: CJP/ AJD1/07 | Course name: English Language for PhD Students 1 | |
| Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: dis | nd the method: ce rse-load (hours): dy period: 28 tance, present | |
| Number of ECTS cro | edits: 2 | |
| Recommended seme | ster/trimester of the course: 1. | |
| Course level: III. | | |
| Prerequisities: | | |
| Conditions for cours Completion of e-cour Written assignments | e completion: rse English for PhD Students (lms.upjs.sk), consultations (1-3). - Professional/Academic CV, Short Academic Biography. | |
| Learning outcomes: The development of so of their linguistic corr syntactic aspects; dev purposeful communic purposes, level B2. | students' language skills - reading, writing, listening, speaking; improvement npetence - students acquire knowledge of selected phonological, lexical and relopment of pragmatic competence - students acquire skills for effective and cation, with focus on Academic English and English for specific/professional | |
| Brief outline of the c Specific aspects of vocabulary developm formation, formal/inf grammar tenses, pass Biography). | ourse: academic and professional English with focus on correct pronunciation, lent (noun and verb collocations, phrasal verbs, prepositional phrases, word- formal language, etc.), selected aspects of English grammar (prepositions, ive voice, etc.), academic writing (professional/academic CV, Short Academic | |
| Recommended litera Moore, J.: Oxford Ac Kolaříková, Z., Petru Košice, Vydavateľstv Tomaščíková, S., Roz Vydavateľstvo Šafári McCarthy, M., O'Del Štepánek, L., J. De H 2011. Armer, T.: Cambridge Ims.upjs.sk | ture: ademic Vocabulary Practice. OUP, 2017. ňová, H., Timková, R.: Angličtina v akademickom prostredí – cvičebnica. o ŠafárikPress, 2021. zenfeld, J. Developing Academic English in Speaking and Writing. kPress, 2021. l, F.: Academic Vocabulary in Use. CUP, 2008. aff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., e English for Scientists. CUP, 2011. | |
| Course language: English, level B2 acc | ording to CEFR | |
| Notes: | | |

| Course assessment Total number of assessed students: 777 | | | | | |
|---|-----|-------|-----|-------|-------|
| N | Ne | Р | Pr | abs | neabs |
| 0.0 | 0.0 | 45.82 | 0.0 | 54.05 | 0.13 |
| Provides: Mgr. Zuzana Kolaříková, PhD. | | | | | |
| Date of last modification: 11.09.2023 | | | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | | | |

| COURSE INFORMATION LETTER | | | |
|---|--|--|--|
| University: P. J. Šafárik University in Košice | | | |
| Faculty: Faculty of Science | | | |
| Course ID: CJP/ AJD2/07Course 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 | | | |
| Number of ECTS credits: 3 | | | |
| Recommended semester/trimester of the course: 2. | | | |
| 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) | | | |
| 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 effectively 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 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. Course language: B2 level according to CEFR | | | |
| Notes: | | | |

| Course assessment | | | | | |
|---|-------------------|---------|------|------|-------|
| Total number o | i assessed studen | 18. 732 | 1 | | |
| Ν | Ne | Р | Pr | abs | neabs |
| 0.27 | 0.0 | 93.72 | 1.09 | 4.78 | 0.14 |
| Provides: Mgr. Zuzana Kolaříková, PhD. | | | | | |
| Date of last modification: 05.02.2024 | | | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | | | |

| | COURSE INFORMATION LETTER | | |
|---|--|--|--|
| University: P. J. Šafár | University: P. J. Šafárik University in Košice | | |
| Faculty: Faculty of So | Faculty: Faculty of Science | | |
| Course ID: ÚCHV/ NSVR/04 | Course name: High-resolution NMR spectroscopy | | |
| Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present | | | |
| Number of ECTS cre | edits: 8 | | |
| Recommended semes | ster/trimester of the course: | | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course 1. Attendance at lecture two lectures / seminar of the curriculum den of a lecture,) 2. Activity at seminar 3. Written assignment instructions. 4. Final test (30% of the 5. Examination (written | e completion: res and seminars (also online form of teaching): the student's absence from s will be justified by the teacher; after a long-term absence, an understanding nonstrated in an alternative form (eg elaboration of assignments, preparation s (also on-line form of teaching) - necessary theoretical preparation its (20% of the total evaluation) - elaboration according to the teacher's he total evaluation). en 25% and oral part 25%). | | |
| Learning outcomes: The aim of the course the acquired knowled | e is to get acquainted with 1D and 2D NMR methods and the application of ge in solving NMR problems. | | |
| Brief outline of the course: 1. Advanced 1D NMR methods a) 13C NMR experiments - APT, DEPT b) NOE experiments c) Selective experiments 2. 2D NMR methods a) Proton-proton correlated experiments (interactions through bonds) - COSY, TOCSY b) Proton-proton correlated experiments (interactions across space) - NOESY c) Proton-carbon correlated experiments - HSQC/HMQC/HETCOR, HMBC, H2BC, EXSIDE d) Carbon-carbon correlated experiments - INADEQUATE Recommended literature: H. Friebolin: Basic One- and Two-Dimensional NMR Spectrocopy, 5. Ed., Wiley, 2010. | | | |
| T. D. W. Claridge: 2016. Atta-ur-Rahman, N Press 1996. | High-Resolution NMR Techniques in Organic Chemistry, 5. Ed., Elsevier, I. I. Choudhary: Solving Problems with NMR spectroscopy, Academic | | |

| Course language: English | | |
|--|---|--|
| Notes: Teaching is carried out in person or, if necessary teaching is specified by the teacher at the begin | y, online, using the MS Teams tool. The form of ning of the semester, updated continuously. | |
| Course assessment Total number of assessed students: 24 | | |
| N | Р | |
| 0.0 100.0 | | |
| Provides: doc. RNDr. Mária Vilková, PhD. | | |
| Date of last modification: 28.01.2022 | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |

| University: P. J. Šafárik University in Košice | | | | |
|---|---|----|--|--|
| Faculty: Faculty of Science | | | | |
| Course ID: ÚCHV/ SSOL/04 | HV/ Course name: Individual Study of Scientific Literature | | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | | |
| Number of ECTS cr | edits: 2 | | | |
| Recommended seme | ster/trimester of the cours | e: | | |
| Course level: III. | | | | |
| Prerequisities: | | | | |
| Conditions for cours | e completion: | | | |
| Learning outcomes: Independent work of a doctoral student with books, monographies, databases and source documents, obtaining informations for elaboration of the thesis, for preparation of experiments or preparation of publication, respectively. | | | | |
| Brief outline of the c Independent study of | Brief outline of the course: Independent study of literature following the suggestions of the tutor. | | | |
| Recommended literature: Books, monographs, Web of Science, SCOPUS, original papers | | | | |
| Course language: English language. | | | | |
| Notes: | | | | |
| Course assessment Total number of assessed students: 213 | | | | |
| | abs | n | | |
| | 100.0 0.0 | | | |
| Provides: | | | | |
| Date of last modification: 05.11.2021 | | | | |
| Approved: doc. RND | Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|--|-----------------|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ ZC/22 | Course name: International Journal | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cro | edits: 8 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Publication accepted | e completion: in a foreign journal as an au | thor/co-author. | |
| By publishing in a foreign journal as an author/co-author, the PhD student demonstrates a high level of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | | |
| Brief outline of the course: | | | |
| Recommended litera | ture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 0 | | | |
| | abs | n | |
| 0.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in Košice | | | |
|--|---|-----------------------------|--|
| Faculty: Faculty of S | cience | | |
| Course ID: ÚCHV/ ZSP1/22 | Course name: International Study Stay less than 30 Days | | |
| Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre | Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | |
| Number of ECTS cro | edits: 5 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Completion of a fore | Conditions for course completion: Completion of a foreign study stay lasting less than 30 days. | | |
| By completing a shorter study stay, the PhD student demonstrates the ability to reflect on research problems and work critically with sources at an expert level and in an interdisciplinary context, while being able to generate new knowledge. He is able to actively communicate at an expert level in more than one language. He acts as a responsible independent scientist, works independently and in a group with the aim of pushing the boundaries of knowledge and transferring them to other areas of research, to practice and to the wider public. He can competently argue and explain his ideas. | | | |
| Brief outline of the course: | | | |
| Recommended litera | ture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 2 | | | |
| | abs | n | |
| | 100.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RND | r. Miroslava Martinková, P | hD., univerzitná profesorka | |

| University: P. J. Šafárik University in Košice | | | |
|---|---|-----------------------------|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ ZSP2/22 | Course name: International Study Stay more than 30 Days | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 10 | | |
| Recommended seme | ster/trimester of the cours | 8: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Completion of a fore | Conditions for course completion: Completion of a foreign study stay lasting more than 30 days. | | |
| Learning outcomes: By completing the study stay, the PhD student demonstrates the ability to reflect on research problems and work critically with sources at an expert level and in an interdisciplinary context, while being able to generate new knowledge. He is able to actively communicate at an expert level in more than one language. He acts as a responsible independent scientist, works independently and in a group with the aim of pushing the boundaries of knowledge and transferring them to other areas of research, to practice and to the wider public. He can competently argue and explain his ideas. | | | |
| Brief outline of the course: | | | |
| Recommended litera | iture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 3 | | | |
| | abs | n | |
| | 100.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RND | Dr. Miroslava Martinková, Pl | 1D., univerzitná profesorka | |
| Date of last modification: 08.11.2022 | | | |
| Approvea: doc. KNDr. Miroslava Martinkova, PhD., univerzitna profesorka | | | |

| University: P. J. Šafá | University: P. J. Šafárik University in Košice | | |
|---|--|--|--|
| Faculty: Faculty of S | Faculty: Faculty of Science | | |
| Course ID: ÚCHV/ MKZ/22 | Course name: International conference abroad | | |
| Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre | Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | |
| Number of ECTS cr | edits: 10 | | |
| Recommended seme | ster/trimester of the course | 2: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Active participation i | e completion: n an international conferenc | e abroad. | |
| Learning outcomes: By actively particip demonstrates a high research methodolog scientific problem by competence to use ex original scientific known means and through a | ating in an international s level of ability to identify, e y in his scientific field. He y using the latest approach xisting theories and concept owledge and communicate n foreign language. | scientific conference abroad, the phD student evaluate, and apply correct scientific methods or demonstrates the ability to reflect on a specific ness and applying them critically. Demonstrates is in an innovative way, as well as generate new research results to a wider audience by adequate | |
| Brief outline of the course: | | | |
| Recommended litera | iture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 22 | | | |
| | abs | n | |
| | 100.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
| | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|---|--|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Course name: Local Cont DK/04 | Course name: Local Conference | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS credits: 2 | | | |
| Recommended semester/trimester of the course | Se: | | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: Active participation in the home conference. | | | |
| By actively participating in the national scientific conference, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology in his scientific field. He demonstrates the ability to reflect on a specific scientific problem by using the latest approaches and applying them critically. Demonstrates competence in using existing theories and concepts in an innovative way, as well as generating new original scientific knowledge and communicating research results to a wider audience using adequate means and through the Slovak language. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 128 | | | |
| abs | n | | |
| 100.0 | 0.0 | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, P | Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |

| University: P. J. Šafárik University in Košice | | | |
|--|--|--|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ DKZU/22Course name: Local Conference with Foreign Participation | | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS credits: 5 | | | |
| Recommended semester/trimester of the course: | | | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: Active participation in a national conference with foreign participation. | | | |
| By actively participating in a scientific conference, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology in his scientific field. He demonstrates the ability to reflect on a specific scientific problem by using the latest approaches and applying them critically. Demonstrates competence to use existing theories and concepts in an innovative way, as well as generate new original scientific knowledge and communicate research results to a wider audience by adequate means and through Slovak or a foreign language. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 15 | | | |
| abs n | | | |
| 100.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in Košice | | | |
|--|---|---------------|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ DC/22 | Course name: Local Journal | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cro | 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. | |
| By publishing in a national journal as an author/co-author, the PhD student demonstrates a high level of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | Course language: | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 0 | | | |
| | abs | n | |
| | 0.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RND | Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |

| University: P. J. Šafárik University in Košice | | | |
|--|--|-----------------------------|--|
| Faculty: Faculty of S | Faculty: Faculty of Science | | |
| Course ID: ÚCHV/ SIG/22 | Course name: Member of the internal project team | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cro | edits: 3 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Co-worker of project | e completion: supported by internal grant | schemes (VVGS) | |
| The PhD student demonstrates the ability to participate in teamwork, to bring his own contribution to the solution of the project objective within the internal grant system at UPJŠ. By solving the internal VVGS grant, he acquires the ability to implement the project plan according to the established procedure, adhere to the project schedule, coordinate his own activities with colleagues, and participate in the creation of outputs. The PhD student gains valuable experience from the practical course of the grant project. | | | |
| Brief outline of the course: | | | |
| Recommended litera | ture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 15 | | | |
| | abs | n | |
| | 100.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RND | r. Miroslava Martinková, Pl | nD., univerzitná profesorka | |

| University: P. J. Šafá | rik University in Košice | | |
|--|---|--|--|
| Faculty: Faculty of S | cience | | |
| Course ID: ÚCHV/ POVK/22 | Course name: Membership in a Conference organizing Committee | | |
| Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre | nd the method: rse-load (hours): y period: esent | | |
| Number of ECTS cr | edits: 3 | | |
| Recommended seme | ster/trimester of the co | ourse: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Work in the organizin | Conditions for course completion: Work in the organizing committee of the conference | | |
| Learning outcomes: By working in the c abilities and compete to manage the implem in writing using vario level with various typ decisions. | rganizing committee of nces to organize a scient ientation in terms of time us technical means as ne es of people, if necessary | If the conference, the PhD student demonstrates the tific or professional event independently or in a team, e and content, to communicate effectively verbally and eded, including in a foreign language at a professional of, correctly recommend solutions or make independent | |
| Brief outline of the course: | | | |
| Recommended litera | iture: | | |
| Course language: | Course language: | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 1 | | | |
| | abs | n | |
| | 100.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RND | Pr. Miroslava Martinkov | á, PhD., univerzitná profesorka | |

Faculty: Faculty of Science

| Course ID: ÚCHV/ | Course name: Modern spectroscopic methods |
|------------------|--|
| MSPM/04 | |

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

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

Course method: present

Number of ECTS credits: 8

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

Participation and activity in seminars - spectrum measurement and solution of advanced spectral examples. Percentage rating of final written exam: 100 - 91% (A), 90 - 81% (B), 80 - 71% (C), 70 - 61% (D), 60 - 51% (E), 50% and less FX. The final evaluation is based on combination of the obtained results from final written exam and successful solution of all spectra given in seminars.

Learning outcomes:

To teach students novel spectral methods and their applications in determination of the structure of unknown molecules. Students learn to measure the spectra of organic compounds (working with FTIR spectrometer) and process the measured data using available software. Solve the structures of unknown compounds by a combination of advanced spectral methods.

Brief outline of the course:

Fundamental concepts, experimental methods, general and special applications of infrared (IR), Raman spectroscopy and mass spectrometry (MS). IR and MS - methods and application. ATR-FTIR spektroscopy. Tandem MS/MS spectrometry. Application of MS in biotechnology, pharmaceutical, clinical or forensic field. Determination of the structure of the substance based on advanced IR and MS methods - sample measurement, processing in the editor and spectrum resolution. Luminescence methods and their applications to structural problems. Online spectral databases, spectrum processing software.

Recommended literature:

- 1. Spectroscopic Methods in Organic Chemistry, Georg Thieme Verlag, Stuttgart, 2007.
- 2. Structure Determination of Organic Compounds, Springer, 2000
- 3. Organic Structures from Spectra, 4. ed. John Wiley and Sons LTD, 2007

Course language:

slovak, english

Notes:

Teaching is carried out in person or, if necessary, online, using the BigBlueButton tool. The form of teaching is specified by the teacher at the beginning of the semester, updated continuously.

| Course assessment | | |
|---|-------|--|
| Total number of assessed students: 12 | | |
| Ν | Р | |
| 0.0 | 100.0 | |
| Provides: RNDr. Monika Tvrdoňová, PhD. | | |
| Date of last modification: 04.08.2022 | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |

| University: P. J. Šafán | rik University in Košice | |
|--|--|--|
| Faculty: Faculty of S | cience | |
| Course ID: ÚCHV/ MOZ/04 | Course name: Molecular devices | |
| Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre | nd the method: e / Practice rse-load (hours): study period: 28 / 28 sent | |
| Number of ECTS cro | edits: 8 | |

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

Student must actively work during semester. The seminar written report on the selected topic of this subject and its oral presentation connected with the common discussion with the examiner. The terminal examination consists of written and oral part.

Terminal examination by written form and oral presentation of the resolved problems, followed by subsequent discussion with the examiner.

The witten part is evaluated as follows: 100-91% of points = A, 90-81% of points = B, 80-71% of points = C, 70-61% = D, 60-51% of points = E, 50% and less = FX.

The final evaluation is based on combination of the obtained results from both parts.

Learning outcomes:

The general review on the principles of the molecular recognition, transformation and translation as the basic functions of the supramolecular structures as the components of the molecular machines. Series of the invited lectures of scientists working on the supramolecular chemistry.

Brief outline of the course:

EN

Receptors, molecular recognition, coordination. The genesis of interactions in supramolecular chemistry. Supramolecular chemistry in the nature. Porfyrins. DNA. Crown ethers, cryptands, cyclophanes. Selectivity and complementarity. Interactions with solvents. Macrocyclic and template effect. Receptors for the neutral molecules. Clathrates and intercalators. Cyclodextrins, calixarens. Fullerenes. Modification of fullerenes. Nanotubes. Supramolecular catalysis and transport. Proximity effect. Active and passive transport. Transporters. Molecular pumps. Bio-inspired supramolecular catalysis. Devices and machines at the molecular level, the concept of molecular machines. Fundamental principles of electron and energy transfer. Micelles and bilayers, Dendrimers.

Recommended literature:

1. J. W. Steed, J. L. Atwood: Supramolecular chemistry, Wiley and Sons Ltd, Chichester, 2000, ISBN ISBN 0-471-98791-3.

2. J. M.Lehn: Supramolecular chemistry: concepts and perspectives, Wiley VCH, Weinheim, 1995.

3. J. W. Steed: Supramolecular chemistry, John Wiley and Sons. Ltd. 2009.

4. V. Balzani, A. Credi, M Venturi: Molecular devices and Machines - a journey into the nano world, Wiley-VCH, Verlag GmbH and Co. KGaA, Weinheim 2003, ISBN 3-527-30506-8.

Course language:

anglický

Notes:

Teaching is carried out in person or, if necessary, online, using the MS Teams tool. The form of teaching is specified by the teacher at the beginning of the semester, updated continuously.

Course assessment

Total number of assessed students: 1

| Ν | Р |
|-----|-------|
| 0.0 | 100.0 |

Provides: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka

Date of last modification: 20.11.2021

Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka
| University: P. J. Šafári | ik University in Košice | | |
|--|---|--|--|
| Faculty: Faculty of Sc | ience | | |
| Course ID: ÚCHV/ MONB/22 | Course ID: ÚCHV/ Course name: Monograph MONB/22 | | |
| Course type, scope an Course type: Recommended course Per week: Per study Course method: pres | nd the method: se-load (hours): y period: sent | | |
| Number of ECTS cree | dits: 20 | | |
| Recommended semes | ter/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course Co-author of the mono | e completion: ograph. | | |
| By publishing a mone evaluate, and apply co to reflect on a scientific demonstrates the comp as to generate new or qualitative and ethical critically evaluate and | ograph, the PhD student of rrect scientific methods or fic problem by using the la petence to use existing the iginal scientific knowledge l standards of the field. T respond to reviewers' sugg | demonstrates a high level of ability to identify, research methodology. It demonstrates the ability test approaches and applying them critically. He ories 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 course: | | | |
| Recommended literat | Recommended literature: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 0 | | | |
| | abs | n | |
| 0.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
| Approveu: doc. KINDI. MITOSIAva Marunkova, FND., univerzitna profesorka | | | |

| University: P. I. Šafárik University in Košica | | | |
|---|--|--------------------------------|--|
| Ecoltry Ecoltry of Science | | | |
| Faculty. Faculty of S | | | |
| Course ID: UCHV/ MONA/22 | Course name: Monograph | in a renowned publishing house | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 40 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Co-author of a monog | e completion: graph in a renowned publish | ing house. | |
| By publishing a monograph in a renowned publishing house, the PhD student demonstrates a high level of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The doctoral student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | | |
| Brief outline of the c | Brief outline of the course: | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 0 | | | |
| | abs | n | |
| 0.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
| | | | |

Faculty: Faculty of Science

| Course ID: ÚCHV/ | Course name: Nitrogen heterocycles |
|------------------|------------------------------------|
| HZD/04 | |

Course type, scope and the method:

Course type: Lecture / Practice

Recommended course-load (hours):

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

Course method: present

Number of ECTS credits: 8

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

Students must actively work during the course in a close collaboration with a teacher.

Student may only miss 1 practice.

Written exam - 100 pts. A minimum of 51 points must be obtained.

Assessment A: 91-100; B: 81-90; C: 71-80; D: 60-71; E: 51-60; FX: 0-50 pts.

Learning outcomes:

The aim of the course is to obtain the knowlegde about nitrogen heterocycles, their synthesis, reactivity as well as relationship between structure and biological properties.

Brief outline of the course:

Signification, synthesis and chemical properties of different types of nitrogen heterocyclic systems. Natural substances containing nitrogen heterocycles, biological activity and drugs based on nitrogen heterocycles and their synthesis.

Attention will be paid to aromatic and non-aromatic compounds, including their biological properties and application in organic synthesis.

A. Aromatic heterocycles

1. Six-membered heterocycles with one heteroatom (pyridine, acridine, quinoline, isoquinoline)

2. Five-membered heterocycles with one heteroatom (pyrrole, indole)

3. Six-membered heterocycles with two or more heteroatoms (pyrimidine, pyridazine, pyrazine, purine, pteridine)

4. Five-membered heterocycles with two heteroatoms (oxazole, isoxazole, thiazole, isothiazole, imidazole, pyrazole)

B. Non-aromatic heterocycles (morpholine, piperidine, piperazine)

Recommended literature:

1. Comprehensive Heterocyclic Chemistry; Katritzky A. R., Rees C. W., Eds., Pergamon Press, Oxford, 1984.

2. Gilchrist T. L.: Heterocyclic Chemistry, Longman, Harlow, 1992.

3. Eichler T., Hauptmann S.: The Chemistry of Heterocycles, Wiley-VCH, Weinheim 2003.

Course language:

Slovak and English

| Notes: | |
|---|------------|
| Course assessment Total number of assessed students: 18 | |
| N | Р |
| 0.0 | 100.0 |
| Provides: RNDr. Mariana Budovská, PhD., univerzitn | á docentka |
| Date of last modification: 17.11.2021 | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | |

| University: P. J. Šafárik University in Košice | | |
|---|---|--|
| Faculty: Faculty of Science | | |
| Course ID: ÚCHV/ Course name: Non-Review NRZ/22 | ved International or National Proceedings | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | |
| Number of ECTS credits: 2 | | |
| Recommended semester/trimester of the course | e: | |
| Course level: III. | | |
| Prerequisities: | | |
| Conditions for course completion: A publication published in a non-reviewed foreign or national journal as an author/co-author. | | |
| Learning outcomes: By publishing in a non-reviewed foreign or national journal as an author/co-author, the PhD student demonstrates the ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The phD student demonstrates the ability to finalize his own thoughts in a written speech. | | |
| Brief outline of the course: | | |
| Recommended literature: | | |
| Course language: | | |
| Notes: | | |
| Course assessment Total number of assessed students: 9 | | |
| abs | n | |
| 100.0 0.0 | | |
| Provides: | | |
| Date of last modification: 08.11.2022 | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |

| University: P. J. Šafá | rik 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 | nd the method: rse-load (hours): y period: esent | |
| Number of ECTS cr | edits: 2 | |
| Recommended seme | ster/trimester of the cours | e: |
| Course level: III. | Course level: III. | |
| Prerequisities: | | |
| Conditions for cours Patent filed, invention | e completion: n, software product created. | |
| Learning outcomes: The PhD student dem or with impact on an | ionstrates 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 | iture: | |
| 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 | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |
| Provides: Date of last modifica Approved: doc. RND | tion: 08.11.2022 Dr. Miroslava Martinková, P | hD., univerzitná profesorka |

| University: P. J. Šafá | rik University in Košice |
|--|---|
| Faculty: Faculty of S | cience |
| Course ID: KPE/ PgVU/17 | Course name: Pedagogy for University Teachers |
| Course type, scope a Course type: Lectur Recommended cour Per week: Per stud Course method: dis | nd the method: e rse-load (hours): y period: 28s tance, present |
| Number of ECTS cr | edits: 5 |
| Recommended seme | ster/trimester of the course: |
| Course level: III. | |
| Prerequisities: | |
| Conditions for cours 1. Development of a 2. Compulsory active | e completion: teaching diary—100% participation and attendance in accordance with the Study Regulations. |
| Students will be able Apply didactic princip the educational proce evaluation of learnin possibilities in the tea teachers taking into a | to: ples, methods, forms, and tools in the teaching of a specialised subject. Specify edures of a university teacher in subject teaching, pedagogical diagnostics, ng outcomes, and self-reflection. Present rationalisation and streamlining aching of specialised subjects. Apply educational competencies of university ccount the peculiarities of educating university students. |
| Brief outline of the c The personality of a learning styles. Poss teacher–student intera of a university teach Forms of university assessment. Creation self-reflection. | ourse: university teacher. Teaching styles. Student in university education. Student ibilities of adapting teaching styles and student learning styles. University action and communication in the teaching process. Pedagogical competencies her. Didactic analysis of the curriculum; teaching materials and textbooks. teaching. Methods of university teaching. Verification methods and student of a didactic test. Designing university teaching process. University teacher |
| Recommended litera Čapek, R. (2015). Mo Publishing, a.s. Danek, J. (2014). Pec Metoda v Trnave. Dargová, J. (2001). T Dvořáček, J. (2014). Hupková, M., Petlák, Kyriacou, CH. (1996 Mertin, V. a kol. (201 Wolters Kluwer. Petty,G. (2013). Mod | nture: oderní didaktika. Lexikon výukových a hodnoticích metod. Praha, Grada lagogická komunikácia na vysokej škole. Trnava, Univerzita sv.Cyrila a vorivé kompetencie učiteľa. Prešov, Privat Press. Základy pedagogiky. Praha, Oeconomica. E. (2004). Sebareflexia a kompetencie v práci učiteľa. Bratislava, IRIS.). Klíčové dovednosti učitele. Praha, Portál. 2). Metody a postupy poznávaní žáka: pedagogická diagnostika. Praha, |

| Prucha, J. (2013). Moderní pedagogika. Praha, Portál. Sirotová, M. (2014). Vysokoškolský učiteľ v edukačnom procese. Trnava, Univerzita sv.Cyrila a Metoda v Trnave. Slávik, M. a kol. (2012). Vysokoškolská pedagogika. Praha, Grada. Šebeň Zaťková, T. (2014). Úvod do vysokoškolskej pedagogiky. Trnava, Univerzita sv.Cyrila a Metoda v Trnave. Turek, I. (2014). Didaktika. Bratislava, Wolters Kluwer, s.r.o. Zormanová, L. (2014). Obecná didaktika. Praha, Grada. | | |
|--|-----|-------|
| Course language: slovak | | |
| Notes: | | |
| Course assessment Total number of assessed students: 120 | | |
| abs | n | neabs |
| 98.33 | 0.0 | 1.67 |
| Provides: doc. PaedDr. Renáta Orosová, PhD. | | |
| Date of last modification: 12.03.2024 | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |

| University: P. J. Šafárik University in Košice | | | | |
|---|--|---|--|--|
| Faculty: Faculty of S | cience | | | |
| Course ID: ÚCHV/ POPV/22 | Course ID: ÚCHV/ Course name: Popularisation of science OPV/22 | | | |
| Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre | nd the method: rse-load (hours): ly period: esent | | | |
| Number of ECTS cr | edits: 5 | | | |
| Recommended seme | ster/trimester of the cours | e: | | |
| Course level: III. | | | | |
| Prerequisities: | | | | |
| Conditions for cours Active involvement i | se completion: n the popularization of scien | nce. | | |
| Learning outcomes: Demonstrated ability communication, iden professional knowled in the field of his scie | to present science to the atify the target group and ac lge. A PhD student is able to entific work, but also in the | lay public, use interactive methods of scientific lapt the communication language to the level of arouse interest and motivate specific target groups wider context of science | | |
| Brief outline of the c | Brief outline of the course: | | | |
| Recommended litera | Recommended literature: | | | |
| Course language: | | | | |
| Notes: | | | | |
| Course assessment Total number of assessed students: 16 | | | | |
| | abs | n | | |
| 100.0 0.0 | | | | |
| Provides: | Provides: | | | |
| Date of last modification: 08.11.2022 | | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | | |
| L | | | | |

| University: P. J. Šafá | rik University in Košice |
|---|---|
| Faculty: Faculty of S | cience |
| Course ID: ÚCHV/ PAKM/04 | Course name: Practical application of quantum chemical methods in organic chemistry |
| Course type, scope a Course type: Lectur Recommended cou Per week: 2 / 2 Per Course method: pre | ind the method: re / Practice rse-load (hours): study period: 28 / 28 esent |
| Number of ECTS cr | edits: 8 |
| Recommended seme | ester/trimester of the course: |
| Course level: III. | |
| Prerequisities: | |
| Conditions for course The examination can In order to pass thi requirements: Studer practise part of the co percent of the total n on the basis of the ma follows: 100 - 91% (2000) | Se completion: I consist of written and/or oral examination as the examiner may determine. Is course, each student must complete ALL of the following compulsory its may only miss 1 practise session. Students must actively work during a purse in a close collaboration with a teacher. Students must obtain at least 51 number of points of the written examination. The final evaluation is assigned ark of the written examination. Students are assigned a grade in the course as A), 90 - 81% (B), 80 - 71% (C), 70 - 61% (D), 60 - 51% (E), 50% and less FX. |
| Learning outcomes: To provide students v of small and medium understand the scope and assess their degn acquired in the exerc software tools (Mopa | with a basic orientation in current quantum chemical methods used in the study n-sized organic molecules. The acquired knowledge will enable students to and limitations of various theoretical models in solving chemical problems ree of reliability and suitability for various types of calculations. The skills ise will allow them to performe the basic types of calculations using available ac, Molden, Gamess, Gaussian,) and analyze the obtained results. |
| Brief outline of the c 1. Overview of curre | ourse: nt quantum mechanical models in chemistry. |

(semiempirical, ab-initio, post-HF, DFT)

2. Conformational analysis and structure optimization of small and medium molecules. (minimization algorithms, description of PES)

3. Basic procedures for investigating the reaction pathways of chem. reactions.

(localization of PES saddle point structures, TS optimization, IRC, calculation of thermodynamic parameters)

4. Qualitative theories and their practical application.

(frontier orbital theory, BEP principle - Hammond's postulate)

5. Calculations of molecular properties.

(vibrational, electronic and NMR spectra, optical properties, electrostatic potential, ...)

6. Solvation models.

(SCRF, PCM, COSMO)

Recommended literature:

1. Foresman, J. B., Frisch, A.: Exploring Chemistry with electronic structure method. Gaussian Inc., 1996.

2. Jensen, F.: Introduction to computational chemistry, J. Willey&Sons, 1998.

3. Leach, A.R.: Molecular modelling. Principles and applications. Longman, 1996.

Course language:

slovak, english

Notes:

Teaching is carried out in person or, if necessary, online using the MS Teams platform. The form of teaching is specified by the teacher at the beginning of the semester, updated continuously.

Course assessment

Total number of assessed students: 5

| Ν | Р |
|-----|-------|
| 0.0 | 100.0 |

Provides: doc. RNDr. Ladislav Janovec, PhD.

Date of last modification: 10.01.2022

Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka

| University: P. J. Šafárik University in Košice | | | |
|--|--------------------------------------|-----|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ VYS/22 | Course name: Presentation in Seminar | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 5 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Presentation at the se | e completion: minar | | |
| By actively participating in the seminar, the PhD student demonstrates the ability to identify, evaluate, and apply correct scientific methods or research methodology in his field of study. He demonstrates the ability to reflect on a specific scientific problem by using the latest approaches and applying them critically. Demonstrates competence in using existing theories and concepts in an innovative way, as well as generating new original scientific knowledge and communicating research results by adequate means and through Slovak or a foreign language | | | |
| Brief outline of the c | ourse: | | |
| Recommended litera | iture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 4 | | | |
| | abs | n | |
| | 100.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
| | | | |

| University: P. J. Safárik University in Košice | | | |
|--|--|-----|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ ZRIG/22 | Course name: Principal investigator of an internal grant (VVGS) | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 10 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Principal investigator | e completion: of an internal grant (VVGS | 5) | |
| The PhD student demonstrates the ability to process a successful application for his own research problem within the internal grant system at UPJŠ. Acquires skills with the design of research stages, their time schedule, measurable outputs and adequate distribution of funds. The very solution of the internal VVGS grant acquires the ability to implement the project intention according to the established procedure, to be responsible for achieving the set outputs. As a responsible researcher, the PhD student acquires competencies in project management, its administration, and presentation of results. | | | |
| Brief outline of the course: | | | |
| Recommended litera | iture: | | |
| Course language: | Course language: | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 10 | | | |
| | abs | n | |
| | 100.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
| | | | |

| University: P. J. Šafárik University in Košice | | | |
|--|--|--|--|
| Faculty: Faculty of Science | | | |
| Course ID: KPPaPZ/PsVU/17 | Course name: Psychology for University Lecturers | | |
| Course type, scope Course type: Lectu Recommended cou Per week: Per stu Course method: di | 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 c | redits: 5 | | |
| Recommended sem | ester/trimester of the course: | | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cour Case study, micro-o Current modification | se completion: utput, its analysis ns of the course are listed in the electronic bulletin board of the course. | | |
| Learning outcomes After completing the and Understand, su psychology, emotion educational psychol b) apply the above ps of university teachir c) to create and in knowledge d) evaluate their per | course, students can: immarize and explain selected psychological knowledge from cognitive n and motivation psychology, personality psychology, developmental, social, ogy and health psychology. sychological knowledge necessary for the professional, competent performance ng practice of doctoral students nplement the teaching of a professional topic with applied psychological formance and the performance of their classmates, provide feedback | | |
| Brief outline of the course: The content of the course is based on selected psychological knowledge of cognitive psychology, psychology of emotions and motivation, personality psychology, developmental, social, educational psychology and health psychology. Teaching is realized by a combination of lectures with interactive, experiential methods, discussion, open communication with mutual respect, support of independence, activity and motivation of students. Syllabus: University teacher and his work in the teaching process with a focus on: teachers in relation to themselves (cognitive, personal, social and competencies in the use of methods), in relation to students and as part of the teacherstudent relationship on the basis of selected areas of cognitive psychology, psychology and health psychology, social psychology, educational psychology and health psychology with application to the university environment Recommended literature: | | | |
| Alexitch, L. R. (200 Schneider F., Gruma Fry, H., Ketteridge, education: Enhancir Mareš, J.: Pedagogio | 5). Applying social psychology to education. Social Psychology.–Ed.: In J., Coutts L.–Sage Publications, Inc, 205-228. S., & Marshall, S. (2008). A handbook for teaching and learning in higher is academic practice. Routledge. cká 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. | | | |
|---|-------------------------------|--------------|--|
| Course language: slovak | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 87 | | | |
| abs n neabs | | | |
| 98.85 0.0 1.15 | | | |
| Provides: PhDr. Anna Janovská, PhD. | | | |
| Date of last modification: 24.06.2022 | | | |
| Approved: doc. RNDr. Miroslava M | lartinková, PhD., univerzitna | á profesorka | |

| University: P. J. Šafárik University in Košice | | |
|---|--|--|
| Faculty: Faculty of Science | | |
| e ID: ÚCHV/ Course name: Q1 journal as co-author /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: 30 | | |
| Recommended semester/trimester of the course: | | |
| Course level: III. | | |
| Prerequisities: | | |
| Conditions for course completion: Publication accepted in a journal of category Q1 as co-author. | | |
| By publishing in a journal of category Q1 as a co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | |
| Brief outline of the course: | | |
| Recommended literature: | | |
| Course language: | | |
| Notes: | | |
| Course assessment Total number of assessed students: 1 | | |
| abs n | | |
| 100.0 0.0 | | |
| Provides: | | |
| Date of last modification: 08.11.2022 | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |

| University: P. J. Šafárik University in Košice | | | |
|--|--|-----------------------------------|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Q11A/22 | Course name: Q1 journal | as first or corresponding author | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cro | edits: 40 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Publication accepted | e completion: in a journal of category Q1 | as first or corresponding author. | |
| By publishing in a journal of category Q1 as the first or corresponding author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 2 | | | |
| | abs | n | |
| | 100.0 0.0 | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|--|--|--|
| Faculty: Faculty of Science | | | |
| urse ID: ÚCHV/ Course name: Q2 journal as co-author SA/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: 20 | | | |
| Recommended semester/trimester of the course: | | | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: Publication accepted in a journal of category Q2 as co-author. | | | |
| By publishing in a journal of category Q2 as a co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 4 | | | |
| abs n | | | |
| 100.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|--|-----------------------------------|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Q21A/22 | Course name: Q2 journal | as first or corresponding author | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cro | edits: 30 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Publication accepted | e completion: in a journal of category Q2 | as first or corresponding author. | |
| By publishing in a journal of category Q2 as the first or corresponding author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 11 | | | |
| | abs | n | |
| | 100.0 0.0 | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|--|---------------|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Q3SA/22 | ourse ID: ÚCHV/ Course name: Q3 journal as co-author 3SA/22 3SA/22 | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 15 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Publication accepted | e completion: in a journal of category Q3 | as co-author. | |
| By publishing in a journal of category Q3 as a co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | | |
| Brief outline of the course: | | | |
| Recommended litera | iture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 5 | | | |
| | abs | n | |
| | 100.0 0.0 | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
| | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|--|--|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Q31A/22 | Course name: Q3 jo | urnal as first or corresponding author | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 25 | | |
| Recommended seme | ster/trimester of the | course: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Publication accepted | e completion: in a journal of categor | ry Q3 as first or corresponding author | |
| By publishing in a journal of category Q3 as the first or corresponding author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 3 | | | |
| | abs | n | |
| 100.0 0.0 | | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|-------------------------|--|--|
| Faculty: Faculty of Science | | | |
| ourse ID: ÚCHV/ Course name: Q4 journal as co-author 4SA/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: 10 | | | |
| Recommended semester/trimester of | the course: | | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: Publication accepted in a journal of cat | egory Q4 as co-author. | | |
| By publishing in a journal of category Q4 as a co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | Recommended literature: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 1 | | | |
| abs | n | | |
| 100.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
| | | | |

| University: P. J. Šafárik University in Košice | | | |
|---|--|-----------------------------------|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Q41A/22 | Course name: Q4 journal | as first or corresponding author | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cro | edits: 20 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for cours Publication accepted | e completion: in a journal of category Q4 | as first or corresponding author. | |
| By publishing in a journal of category Q4 as the first or corresponding author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas. | | | |
| Brief outline of the c | ourse: | | |
| Recommended litera | ture: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 0 | | | |
| | abs | n | |
| | 0.0 0.0 | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RND | r. Miroslava Martinková, P | hD., univerzitná profesorka | |

| University: P. J. Šafárik University in Košice | | | |
|---|--|----|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ RZ/22 | ourse ID: ÚCHV/ Course name: Reviewed International or Local Proceedings Z/22 | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cro | edits: 5 | | |
| Recommended seme | ster/trimester of the course | 2: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: A publication published in a peer-reviewed foreign or national proceedings as an author/co-author. | | | |
| By publishing in a peer-reviewed foreign or national journal as an author/co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to critically evaluate and respond to reviewers' suggestions, to finalize his own ideas | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 46 | | | |
| abs n | | | |
| 100.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

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|--|--|----|--|
| University: P. J. Šafárik University in Košice | | | |
| Faculty: Faculty of S | Faculty: Faculty of Science | | |
| Course ID: ÚCHV/ SCI/22 | Course name: SCI Citation | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cro | edits: 8 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| 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: 13 | | | |
| abs n | | | |
| 100.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

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|--|--|--|--|
| University: P. J. Safá | University: P. J. Šafárik University in Košice | | |
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Course name: Saccharides CHSA/04 | | | |
| Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present | | | |
| Number of ECTS credits: 8 | | | |
| Recommended semester/trimester of the course: | | | |
| Course level: III | | | |

Prerequisities:

Conditions for course completion:

Student must actively work during semester (seminar written discussion). The preparation of the material on the application of carbohydrates as the useful chirons in the stereoselective synthesis of the various natural products and its oral presentation.

The terminal examination consists of written and oral part.

Terminal examination by written form and oral presentation of the resolved synthetic problems, followed by subsequent discussion with the examiner.

The witten part is evaluated as follows: 100-91% of points = A, 90-81% of points = B, 80-71% of points = C, 70-61% = D, 60-51% of points = E, 50% and less = FX.

The final evaluation is based on combination of the obtained results from both parts.

Learning outcomes:

The general review on carbohydrate chemistry and applications of the simple saccharide molecules as chirons (chiral-pool strategy) in modern stereoselective syntheses of various natural products and their analogues involving multiple stereogenic centers.

Brief outline of the course:

General introduction, nomenclature of monosaccharides, configuration and stereochemistry of monosaccharides (the Fischer projection, the Haworth projection, conformation of sugars). Reactions of monosaccharides (reactions of carbonyl groups and hydroxyl groups, protective group strategies, production of ethers, esters, acetals, ketals. Monosaccharide derivatives, their nomenclature and preparation. Ascending and descending reactions of monosaccharides. Functionalization of saccharides. Nucleophilic substitutions, oxidations, reaction of the anomeric carbon. Glycosylation methods. Synthesis of C-, N- and O-glycosides. Oligosaccharide synthesis. Application of monosaccharides and their derivatives as the chiral templates in the stereoselective organic synthesis.

Recommended literature:

Levy, D. E., Fügedi, P.: The organic chemistry of sugars. Taylor & Francis Group, LLC 2006, ISBN: 0-8247-5355-0.

2. El Khadem, H. S.: Carbohydrate Chemistry: Monosaccharides and Their Oligomers. Academic Press 1988, INC. (London) Ltd., ISBN: 0-12-236870-3.

 Miljković, M.: Carbohydrates. Synthesis, mechanisms and stereoelectronic effects. Springer Science and Business Media, LLC, New York, 2009. ISBN: 978-0-387-92265-2.
 Sinnott, M. L.: Carbohydrate Chemistry and Biochemistry. RSC Publishing 2007, UK, .ISBN 978-0-85404-256-2.

| Course language: anglický | | |
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| Notes: Teaching is carried out in person or, if necessary, online, using the MS Teams tool. The form of teaching is specified by the teacher at the beginning of the semester, updated continuously. | | |
| Course assessment Total number of assessed students: 26 | | |
| N P | | |
| 0.0 100.0 | | |
| Provides: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |
| Date of last modification: 20.11.2021 | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |
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| University, r. J. Satalik University in Rusice | | | |
|--|--|--|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Course name: Scientific work after sending to the editorial office | | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS credits: 5 | | | |
| Recommended semester/trimester of the course: | | | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: Scientific work after being sent to the editorial office as an author/co-author. | | | |
| By sending a manuscript to the editors of a scientific journal as an author/co-author, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology. He demonstrates the ability to reflect on a scientific problem by using the latest approaches and applying them critically. He demonstrates the competence to use existing theories and concepts in an innovative way, as well as to generate new original scientific knowledge, which he can publish according to the highest qualitative and ethical standards of the field. The PhD student demonstrates the ability to formulate his own ideas in a structured form. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 2 | | | |
| abs n | | | |
| 100.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Safarik | University | / In Kosice |
|----------------------------------|------------|-------------|
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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: 187

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Provides: doc. RNDr. Marián Kireš, PhD.

n0.0 Date of last modification: 08.11.2022

Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka

| University: P. J. Šafárik University in Košice | | | |
|--|--|--|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ VPSV/22Course name: Supervision of a Students Scientific Work | | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: | | | |
| Number of ECTS credits: 8 | | | |
| Recommended semester/trimester of the course: | | | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: Supervision of Student's Scientific Activity | | | |
| Learning outcomes: By guiding a student within the SOČ or ŠVOČ, the PhD student demonstrates broad and scientifically based knowledge in the field of study, as well as knowledge of a wide range of methods and approaches. Demonstrates the ability to critically assess a professional problem and its proposed solution, as well as to evaluate it and possibly propose another solution. He applies knowledge and skills from the field of pedagogical sciences to his own field. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 4 | | | |
| abs n | | | |
| 100.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

| University: P. J. Šafárik University in KošiceFaculty: Faculty of ScienceCourse ID: ÚCHV/Course name: Teaching action | | |
|---|--|--|
| Faculty: Faculty of Science Course ID: ÚCHV/ Course name: Teaching action | | |
| Course ID: ÚCHV/ Course name: Teaching acti | | |
| PPC1/22 | ID: ÚCHV/ Course name: Teaching activities 1 h/s | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | |
| Number of ECTS credits: 2 | | |
| Recommended semester/trimester of the course: | : | |
| Course level: III. | | |
| Prerequisities: | | |
| Conditions for course completion: Direct teaching activity 1 semester hour | | |
| Learning outcomes: Through pedagogical activity, the PhD student demonstrates the ability to transfer and integrate knowledge from his own field of study into education. He is able to select and apply the right techniques and strategies of study group management, higher education and evaluation of learning outcomes. He is capable of designing and implementing part of the educational process in accordance with current trends in higher education and the requirements placed on the level of communication and digital competencies. | | |
| Brief outline of the course: | | |
| Recommended literature: | | |
| Course language: | | |
| Notes: | | |
| Course assessment Total number of assessed students: 8 | | |
| abs n | | |
| 100.0 0.0 | | |
| Provides: | | |
| Date of last modification: 08.11.2022 | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | |
| abs n 100.0 0.0 | | |

| University: P. J. Šafá | University: P. J. Šafárik University in Košice | | |
|---|--|----|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ PPC2/22 | Course name: Teaching activities 2 h/s | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 4 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: Direct teaching activity 2 semester hours | | | |
| Learning outcomes: Through pedagogical activity, the PhD student demonstrates the ability to transfer and integrate knowledge from his own field of study into education. He is able to select and apply the right techniques and strategies of study group management, higher education and evaluation of learning outcomes. He is capable of designing and implementing part of the educational process in accordance with current trends in higher education and the requirements placed on the level of communication and digital competencies. | | | |
| Brief outline of the course: | | | |
| Recommended litera | Recommended literature: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 9 | | | |
| abs n | | | |
| 100.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
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| University: P. J. Šafá | rik University in Košice | | |
|---|---|----|--|
| Faculty: Faculty of S | Faculty: Faculty of Science | | |
| Course ID: ÚCHV/ PPC3/22 | V/ Course name: Teaching activities 3 h/s | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS cr | edits: 6 | | |
| Recommended seme | ster/trimester of the cours | e: | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: Direct teaching activity 3 semester hours | | | |
| Learning outcomes: Through pedagogical activity, the PhD student demonstrates the ability to transfer and integrate knowledge from his own field of study into education. He is able to select and apply the right techniques and strategies of study group management, higher education and evaluation of learning outcomes. He is capable of designing and implementing part of the educational process in accordance with current trends in higher education and the requirements placed on the level of communication and digital competencies. | | | |
| Brief outline of the course: | | | |
| Recommended litera | Recommended literature: | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 1 | | | |
| abs n | | | |
| 100.0 0.0 | | | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
| Approven. uoc. KINDI. IVIIIosiava Iviarunikova, FIID., univerziuta profesorka | | | |

| University: P. J. Šafárik University in Košice | | | | |
|--|---|-----|--|--|
| Faculty: Faculty of Science | | | | |
| Course ID: ÚCHV/ PPC4/22 | Course name: Teaching activities 4 h/s | | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | | |
| Number of ECTS credits: 8 | | | | |
| Recommended semester/trimester of the course: | | | | |
| Course level: III. | | | | |
| Prerequisities: | | | | |
| Conditions for course completion: Direct teaching activity 4 semester hours | | | | |
| Learning outcomes: Through pedagogical activity, the PhD student demonstrates the ability to transfer and integrate knowledge from his own field of study into education. He is able to select and apply the right techniques and strategies of study group management, higher education and evaluation of learning outcomes. He is capable of designing and implementing part of the educational process in accordance with current trends in higher education and the requirements placed on the level of communication and digital competencies | | | | |
| Brief outline of the course: | | | | |
| Recommended literature: | | | | |
| Course language: | | | | |
| Notes: | | | | |
| Course assessment Total number of assessed students: 7 | | | | |
| | abs | n | | |
| | 100.0 | 0.0 | | |
| Provides: | | | | |
| Date of last modification: 08.11.2022 | | | | |
| Approved: doc. RNI | Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |
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| University: P. J. Šafárik University in Košice | | | | |
|--|--------------------------------|-----|--|--|
| Faculty: Faculty of Science | | | | |
| Course ID: ÚCHV/ KZP/22 | Course name: Thesis consultant | | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | | |
| Number of ECTS credits: 4 | | | | |
| Recommended semester/trimester of the course: | | | | |
| Course level: III. | | | | |
| Prerequisities: | | | | |
| Conditions for course completion: Final thesis consultant. | | | | |
| Learning outcomes: By consulting the final thesis, the PhD student demonstrates broad and scientifically based knowledge in the field of study, as well as knowledge of a wide range of methods and approaches. Demonstrates the ability to critically assess a professional problem and its proposed solution, as well as to evaluate it and possibly propose another solution. He applies knowledge and skills from the field of pedagogical sciences to his own field. | | | | |
| Brief outline of the course: | | | | |
| Recommended literature: | | | | |
| Course language: | | | | |
| Notes: | | | | |
| Course assessment Total number of assessed students: 30 | | | | |
| | abs | n | | |
| | 100.0 | 0.0 | | |
| Provides: | | | | |
| Date of last modification: 08.11.2022 | | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | | |
COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice | | | |
|---|---------------------------------|-----|--|
| Faculty: Faculty of Science | | | |
| Course ID: ÚCHV/ Co VZP/22 | Course name: Thesis supervising | | |
| Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present | | | |
| Number of ECTS credits: 8 | | | |
| Recommended semester/trimester of the course: | | | |
| Course level: III. | | | |
| Prerequisities: | | | |
| Conditions for course completion: Supervisor of the final thesis. | | | |
| Learning outcomes: By supervising the final thesis, the PhD student demonstrates broad and scientifically based knowledge in the field of study, as well as knowledge of a wide range of methods and approaches. Demonstrates the ability to critically assess a professional problem and its proposed solution, as well as to evaluate it and possibly propose another solution. He applies knowledge and skills from the field of pedagogical sciences to his own field. | | | |
| Brief outline of the course: | | | |
| Recommended literature: | | | |
| Course language: | | | |
| Notes: | | | |
| Course assessment Total number of assessed students: 1 | | | |
| at | bs | n | |
| 100 | 0.0 | 0.0 | |
| Provides: | | | |
| Date of last modification: 08.11.2022 | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | |

COURSE INFORMATION LETTER

| University: P. J. Šafárik University in Košice | | | | | |
|--|--------------------------|----------------|--|--|--|
| Faculty: Faculty of Science | | | | | |
| Course ID: ÚCHV/ PDS/22 | Course name: Writing Dis | sertation 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: 20 | | | | | |
| Recommended semester/trimester of the course: | | | | | |
| Course level: III. | | | | | |
| Prerequisities: | | | | | |
| Conditions for course completion: Obtaining the required number of credits in the prescribed composition according to the UPJŠ study regulations, preparation and defense of the thesis, successfully completed dissertation examination. Learning outcomes: The PhD student demonstrated the prerequisites for successful continuation of the study by fulfilling the conditions prescribed by the study regulations for the study and scientific part of the doctoral | | | | | |
| study related to the topic of the dissertation. | | | | | |
| Brief outline of the course: | | | | | |
| Recommended literature: | | | | | |
| Course language: | | | | | |
| Notes: | | | | | |
| Course assessment Total number of assessed students: 8 | | | | | |
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| | 0.0 | 100.0 | | | |
| Provides: | | | | | |
| Date of last modification: 08.11.2022 | | | | | |
| Approved: doc. RNDr. Miroslava Martinková, PhD., univerzitná profesorka | | | | | |
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