CONTENS

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ AHM/25	**Name:** Active Learning and Evaluation Methods in Teaching Chemistry

Types, range and methods of educational activities:
Form of study: Seminar
Recommended extent of course (in hours):
Per week: 2 **For the study period:** 26
Methods of study: present

Number of credits: 1

Recommended semester/trimester of study: 3.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
During the semester, the student submits their solved tasks. Within the assessment of the assignments, in addition to solving tasks (max. 8 points), their submission on time (max. 2 points) is taken into account.
At the end of the subject, the student passes a comprehensive written examination, from which he must obtain at least 50% of the points.
The result of the students' summary assessment will be calculated according to the following formula:
Final grade=(1x average % of success on the assignments + 2 x % of success on the written examination) / 3.
Total student workload: 1 credit = 25-30 hours
- 26 hours of participation on lessons in present form; 4 hours solving calculation tasks and other assigned learning tasks; and self-learning.
The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject.
90-100% is required to achieve an A grade; for grade B 80-89%; for grade C 70-79%; for D rating 60-69% and for E rating 50-59% of the total number of points.

Results of education:
The student who successfully completes the subject:
Knowledge
• is able to name and characterize several teaching methods and forms supporting active student learning;
• is able to explain the impact of verbal and non-verbal communication on the classroom climate;
• is able to describe psychological aspects of motivation and motive;
• is able to list and characterize the forms, methods and strategies of motivation and activation within the profile subject;
• is able to apply the principles of effective communication supporting active student learning;
• is able to characterize the philosophical and methodological starting points, forms and types of student assessment and their psychodidactic aspects;
• possesses the theoretical foundations of assessment and feedback;
• is able to provide an overview of new trends in assessment in education;

• has knowledge of methodological instructions and rules regarding the assessment and classification of pupils;
• is able to adequately apply and integrate diverse assessments in chemistry education;
Skills
• has the skills of effective planning, projecting, managing and organizing the educational process in profile educational areas or specialization;
• is ready to plan and manage educational activities and learning of a group of pupils and the whole class;
• is able to select appropriate tasks for the given topics, which motivate students to take action in their learning process and support their active learning;
• is able to independently and adequately implement pedagogical evaluation;
• is capable of self-evaluation and thus ensuring monitoring of his/her professional development;
• is able to evaluate pupils with regard to their developmental and individual characteristics;
• is able to apply various forms and methods of assessment;
• is able due to reflection to evaluate the teaching process in comparison with the projected teaching process and to make the necessary corrections;
• is able to evaluate pupils without prejudices and stereotypes;
• is able to apply the above in practice when creating models for chemistry lessons;
Competencies
• is able to think creatively, and independently plan his own study;
• possesses autonomy and responsibility in decision-making in connection with the classroom teaching of chemistry;
• is capable of implementing educational diagnostic and evaluation processes;
• possesses abilities to perform the profession of a teacher, meets the requirements of the professional standard of a beginning pedagogical employee;
• is able to reflect and improve on the effectiveness of his own teaching activity;
• is able to work creatively, efficiently and independently;
• can identify with his own profession.

Brief syllabus:

1. Constructivism. The role of teacher and learner in the constructivist learning process. Teacher communication as a tool of motivation, activation and guidance, mentoring, and facilitation.
2. Characteristics and types of active learning methods in teaching chemistry. Simple active learning methods applicable in the class-hour organizational form of teaching chemistry. Application of simple active learning methods in teaching chemistry.
3. Characteristics of cooperative learning. Application of cooperative learning in the context of chemistry teaching.
4. Problem teaching in the context of chemistry teaching.
5. Inquiry-based learning in the context of chemistry teaching.
6. Characteristics of project management in education. Project method. Project-based learning in the context of chemistry teaching.
7. Self-regulating learning and reflection-based learning.
8. Basic concepts of evaluation - forms and methods of evaluation. Classification.
9. Functions and general principles of evaluation.
10. Current trends of classroom assessment.
11. The type of learning outcomes in the subject of chemistry and the way of collecting the learning evidence.
12. The concept of portfolio/e-portfolio and its role and possibilities in chemistry education.

13. Description and characterization of the pedagogical terms: assessment for/of/as learning and their types. Assessment strategies and tools in chemistry education and the possibilities of their implementation in the practice of the chemistry teachers.
14. The learning tasks´ assessment. Creation of a written test in chemistry. Written test key. Evaluation aspects of tests´ in the approach of formative or summative assessment and their application in practice.
15. Characteristics of self-reflection, peer assessment, group assessment, metacognitive assessment and implementation of their strategies and tools.

Literature:

Garai, I., Vincze,B., Szabó,Z.A. Hiteles pedagógia. Budapest: ELTE Eötvös Kiadó, 2016. 126s. ISBN 978-963-284-828-0. Dostupné na internete: http://www.eltereader.hu/media/2016/11/Hiteles_pedagogia_Golnhofer_READER1.pdf
Gavora, P. Akí sú moji žiaci? - 3. vyd. - Nitra : Enigma, 2011. - 222 s. - ISBN 978-80-89132-91-1.
Károly, K & Homonnay, Z. Diszciplínák tanítása – a tanítás diszciplínái 4. - A tanulás és tanítás értékelése. Budapest: ELTE Eötvös Kiadó, 2017. 356s. ISBN 978-963-284-909-6. Dostupné na internete: http://www.eltereader.hu/media/2017/07/Diszciplinak_4_READER.pdf
Slavík, J. Hodnocení v současné škole : Východiska a nové metodypro praxi. - 1. vyd. - Praha : Portál, 1999. - 190 s. - ISBN 80-7178-262-9
Turek, I. Zvyšovanie efektívnosti vyučovania. Bratislava : Metodické centrum, 1997. 316s. ISBN 8088796490
Vidákovich, T. Diagnosztikus pedagógiai értékelés. Budapest : AkadémiaiKiadó, 1990. 232. ISBN 9630559676
Zelina, M. Stratégie a metódy rozvoja osobnosti : Metódy výchovy. 2. vyd. - Bratislava : Iris, 1996. - 234 s. - ISBN 80-967013-4-7
Starý, K. & Laufková, V. a kol. Formativní hodnotení ve výuce - 1. vyd. - Praha : Portál, 2016. - 175 s. - ISBN 978-80-262-1001-6.
Szarka, K. Súčasné trendy školského hodnotenia: Koncepcia rozvíjajúceho hodnotenia. 1. vyd. Komárom: Kompress, 2017. 147 s. ISBN 978-963-12-9692-1.

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 10

A	B	C	D	E	FX
40.0	30.0	20.0	0.0	10.0	0.0

Teacher: Mgr. Katarína Szarka, PhD., Mgr. Andrea Vargová, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ CDS/25	**Name:** Chemical Didactical Software
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: During the semester the assignments submitted by the student will be evaluated. When evaluating the submitted assignments, in addition to the right solutions (for which you can get a maximum of 8 points), the submission of the assignments by the deadline is also taken into account (max. 2 points). During the semester, the student works continuously on a seminar paper written on a chosen topic of the subject. The paper must be submitted at the end of the seminar. At the end of the course, the student takes part in a written examination. In order to successfully finish the course 50 % of the maximally available points must be obtained. At the final evaluation of the course the results of the submitted assignments, the seminar paper and the written examination are taken into account. Final grade=(1 x the % expression of the performance achieved on the submitted assignments + 1 x the % expression of the performance achieved in the seminar + 1 x the % expression of the performance achieved in the written examination)/3. Total student load: 3 credits = 75-90 hours, of which - participation in 26 hours of face-to-face education; 13 hours of calculation tasks or solving other chemical tasks; 23-38 hours of independent study and preparation for the written examination.. The condition for successful completion of the course is to obtain at least 50% of the maximum score. The course is graded on the following grading scale: A – 100–90%, B – 89–80%, C – 79–70%, D – 69–60%, E – 59–50%	
Results of education: After successfully completing the subject, the student: Knowledge: • has knowledge about the digital society related to the teaching profession and its performance; • has knowledge of the Microsoft 365 software products; • with the help of spreadsheet software is able to evaluate the measurement results of laboratory chemistry experiments; • uses interactive communication within the Internet, is able to search information sources and scientific databases; • knows the challenges of the digital world, which are reflected in the teaching of chemistry;	

• can characterize the basic concepts of information and communication technology and digital technology;
• knows modern methods and software for visualizing chemical processes;
• knows the molecular modeling software used to calculate the basic properties of molecules;
• knows the forms and methods of distance education;
• knows the possibilities of online learning that supports the active learning of the student;
• knows the strategies, methods and forms for developing students' digital literacy within the subject area;
• knows the principles of effective communication in the digital world;
Skills:
• has extensive methodological abilities and skills in the field of information and communication technologies;
• independently applies appropriate work methods in the digital world;
• is able to navigate the digital information world and is able to use e-resources during his professional activities;
• is able to navigate the range of possibilities for the use of digital technology by supporting the development processes of individuals, their lifelong positive stimulation and the developmental differences of individuals resulting from health or social disadvantages;
• proficient in the basic operation and application of the selected software in the chemistry teaching process;
• integrates ICT/DT into the chemistry teaching process in accordance with the educational content of the ŠVP ISCED 2 and ISCED 3A program;
Competencies:
• is socially committed, has socially accepted civic attitudes, has developed a positive attitude towards his profession, the target group of his professional activity and his own lifelong learning, with regard to the requirements of the digital society;
• is competent to practice the profession of a pedagogical employee, meets the requirements of the professional standards of a beginning pedagogical employee;
• is able to react, improve and perfect the effectiveness of their own educational activities in the digital society

Brief syllabus:

1. Applications and services of the Microsoft 365 program package for chemistry teachers
2. Software for evaluating the results of chemical experiments (Microsoft 365 Excel and other spreadsheet software)
3. Interactive communication on the Internet - discussion forums, chat, Messenger, search for information sources - scientific databases
4. Visualization of the results of theoretical chemical calculations (ChemCraft). Analysis and visualization of molecular trajectories (Molden, Molview).
5. Software applications of computer molecular modeling (Avogadro, Hyperchem).
6. Methods of solving tasks using computer molecular modeling software applications
7. Chemical graphics software (ACD/ChemSketch)
8. Mobile applications for the visualization of molecules (WebMO, Molecular Constructor a iné).
9. Simulations and virtual laboratories (Virtual Lab, Yenka, NASA's virtual microscope).
10. E-learning and online learning and teaching interfaces in the teaching of chemistry.
11. Editing a website as creating digital teaching material in the digital educational environment.

Literature:

Abonyi-Tóth, A., Turcsányi_Szabó, M. A mobiltechnológiával támogatott tanulás és tanítás módszerei. Educatio Társadalmi Szolgáltató Nonprofit Kft., 2015, (dostupné na internete: https://www.educatio.hu/pub_bin/download/tamop311_II/eredmenyek/m_learning/mlearning_kotet.pdf)
Juhász, György. A számítógépes molekulamodellezés és a kémiai kötés elméletének oktatása. 1. vyd. Győr: Palatia Nyomda és Kiadó, 2016. 116 s. [5,62 AH]. ISBN 978-963-7692-78-9.
Juhász, György. Web-based molekulové modelovanie. In: Inovácie v pregraduálnej príprave učiteľov s využitím webových aplikácií. Szarka Katarína. Komárom: KOMPRESS Nyomdaipari Kft., 2018, s. 81-96 [1,15 AH]. ISBN 978-615-00-2597-1.
Juhász, György. Nové technológie a výučba chemickej väzby. In: Education for information and knowledge based society. Komárno: Univerzita J. Selyeho, 2012, P. 204-209. ISBN 978-80-8122-064-7.
Kalaš, Ivan et al. Premeny školy v digitálnom veku. Bratislava: SPN – Mladé letá,s.r.o.,2013. ISBN 978-80-10-02409-4. Košice: pre UIPŠ vydal elfa, s.r.o., 2010. ISBN 978-80-8086-143-8.
Kalaš, Ivan et al. Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika - Digitálne technológie menia poznávací proces. Bratislava: ŠPU, 2010, ISBN 978-80-8118-047-7, dostupné na internete: https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/digitalne_technologie_menia_poznavaci_proces.pdf)
LÉVAI, D., PAPP- Lévai, D., Papp-Danka, A. Interaktív oktatásinformatika. Eger: Eszterházy Károly Főiskola, ISBN 978-615-5297-74-8, (dostupné na internete: http://www.eltereader.hu/media/2016/02/Interaktiv_Oktatasinformatika_READER.pdf)
Ollé, J. Virtualis kornyezet, virtualis oktatas. Budapest: ELTE Eötvös Kiadó, 2012, ISBN 978 963 284 283 7, (dostupné na internete: http://www.eltereader.hu/media/2013/11/Oll%C3%A9_1_kotet_READER.pdf)
Ollé, J. et al. Oktatásinformatikai módszerek: Tanítás és tanulás az információs társadalomban. Budapest: ELTE Eötvös Kiadó, 2013, ISBN 978 963 312 157 3, (dostupné na internete: http://www.eltereader.hu/media/2013/11/Olle2_okt-inform_READER.pdf Szarka, Katarína et al. Inovácie v pregraduálnej príprave učiteľov s využitím webových aplikácií. 1. vyd. Komárom: KOMPRESS Nyomdaipari Kft., 2018. 154 s. [11,21AH]. ISBN 978-615-00-2597-1.

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 1

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

Teacher: Dr. habil. PaedDr. György Juhász, PhD., Mgr. Katarína Szarka, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ CH7/25	**Name:** Selected chapters of atomis structure and chemical bond theories

Types, range and methods of educational activities:
Form of study: Lecture / Seminar
Recommended extent of course (in hours):
Per week: 1 / 1 **For the study period:** 13 / 13
Methods of study: present

Number of credits: 4

Recommended semester/trimester of study: 1.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
The seminar ends with a written examination, which can be divided into two during the semester if needed. In the case of a division in two, the final evaluation of the seminar is given by the average result of the two written examinations. Only students who have passed the written examination with at least 50% are allowed to participate the oral examination. During the termtime of the semester, the student can earn additional points by presenting specific topics regarding to the subject of the course.
The exam of the course consists of a written examination. The written examination must be completed with a score of over 50%, otherwise the exam will be evaluated as insufficient (Fx) at the given time.
The final assessment of the course is as follows:
0.3 x the % of points awarded for the submitted assignments + 0.3 x the % of points awarded for the evaluation of the seminar's written examinations + 0.4 x the % of points awarded for the exam part.
Total student load: 4 credits = 100-120 hours
- 26 hours of participation in contact classes; 26 hours of preparing and solving seminar tasks; 13 hours of seminar work and presentation preparation; 35-55 hours of self-study, preparation for exams.
The condition for successful completion of the course is to obtain at least 50% of the maximum score.
The course is graded on the following grading scale: A – 100–90%, B – 89–80%, C – 79–70%, D – 69–60%, E – 59–50%.

Results of education:
After successfully completing the course, the student:
Knowledges:
• knows the basic models of the atomic structure, Bohr's postulate and the meaning of quantum numbers, as well as their relationship with the atomic emission spectrum;
• successfully defines the conceptual, grouping and instrumental structure of the quantum mechanical model of the electronic structure;

• knows the basic concepts of modern chemistry from the perspective of quantum theory, such as the wave-particle duality, the quantization of energy and states, the basic principles of filling electron orbits;
• relates the atomic structure and chemical properties of the elements;
• knows the methodological apparatus of modern bond theory;
• determine the types of individual molecular orbitals based on the MO theory, and be able to apply this knowledge to homo- and heteropolar diatomic molecules;
• can apply the MO theory in organic chemistry, knows the Hückel theory and its application in organic chemistry;
• acquires basic knowledge of quantum chemical methods and available programs used in molecular modeling.
Skills:
• applies the Bohr model to the atomic emission spectrum and is able to apply the basic principles of quantum theory in constructing the electron configuration of atoms;
• able to analyze the relationship between the electron configuration of atoms and the elements;
• recognizes the types of molecular orbitals in simple inorganic compounds;
• determines the geometry configuration of molecules based on hybridization and the VSEPR theory;
• calculate the MO energy states and other properties in conjugated organic compounds based on the HMO theory;
• determine the course of electrocyclization and cycloaddition reactions based on the Woodward-Hoffmann and Fukui rules;
• acquires the basic knowledge to use available quantum chemistry programs.
Competencies:
• has creative thinking and acts independently within his own educational process;
• able to make autonomous and responsible decisions within the framework of the chemistry course;
• capable of independent and efficient activity.

Brief syllabus:
1. Bohr model and the quantum mechanical model of the atomic structure.
2. Quantum numbers. The Pauli exclusion principle, the electron configuration of atoms.
3. Schrödinger equation, the Born–Oppenheimer approach. The variation principle.
4. The VB theory.
5. Quantum theory of chemical bonding. The MO description.
6. Localized and delocalized orbitals. Bonding, non-bonding and relaxing orbitals. Classification of MO — π- and δ-MO.
7. MO in homopolar and heteropolar diatomic molecules.
8. Hybridization of atomic orbitals, molecular geometry, VSEPR.
9. Chemical bonding in organic compounds, conjugated #-systems, Hückel's MO theory (HMO).
10. Application of the HMO method.
11. Symmetry of orbitals, preservation of orbital symmetry during a reaction, the Woodward-Hoffmann and Fukui rules.
12. Quantum chemical methods – SCF, semiempirical methods – available software applications.
13. Quantum chemical methods – the DFT method – available software applications.

Literature:
Juhász, György. A számítógépes molekulamodellezés és a kémiai kötés elméletének oktatása. (Počítačové modelovanie molekúl a výučba teórie chemickej väzby) 1. vyd. Győr: Palatia Nyomda és Kiadó, 2016. 116 s. [5,62 AH]. ISBN 978-963-7692-78-9.

Juhász, György. Web-based molekulové modelovanie. In: Inovácie v pregraduálnej príprave učiteľov s využitím webových aplikácií. Szarka Katarína. Komárom: KOMPRESS Nyomdaipari Kft., 2018, s. 81-96 [1,15 AH]. ISBN 978-615-00-2597-1.
Juhász, György. Nové technológie a výučba chemickej väzby. In: Education for information and knowledge based society. Komárno: Univerzita J. Selyeho, 2012, P. 204-209. ISBN 978-80-8122-064-7.
Nyilasi János: Molekulák. - 1. vyd. - Budapest : Tankönyvkiadó, 1978. - 111 s. - ISBN 963 17 3355 6.
Varsányi György: Az atom és molekulaspektroszkópia elméleti alapjai - 1. vyd. - Budapest : Tankönyvkiadó, 1982. - 122 s.

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 10

A	B	C	D	E	FX
40.0	30.0	20.0	10.0	0.0	0.0

Teacher: Dr. habil. PaedDr. György Juhász, PhD., doc. RNDr. Róbert Gyepes, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ CH8/25	**Name:** Selected chapters of coordination chemistry and organometallic chemistry

Types, range and methods of educational activities:
Form of study: Lecture / Seminar
Recommended extent of course (in hours):
Per week: 1 / 1 **For the study period:** 13 / 13
Methods of study: present

Number of credits: 4

Recommended semester/trimester of study: 2.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
The seminar ends with a written examination, which can be divided into two during the semester if needed. In the case of a division in two, the final evaluation of the seminar is given by the average result of the two written examinations. Only students who have passed the written examination with at least 50% are allowed to participate the oral examination.
The exam of the course consists of a written and an oral part. Only those students who have passed the written part with a score of over 50% are allowed to take the oral part, otherwise the exam will be evaluated as insufficient (Fx) at the given time.
The final assessment of the course is as follows:
0,40 x the % of points awarded for the evaluation of the seminar's written examinations + 0.6 x the % of points awarded for the exam part.
Total student load: 4 credits = 100-120 hours
- 26 hours of participation in contact classes; 26 hours of preparing and solving seminar tasks; 48-68 hours of self-study, preparation for written and oral exams.
The condition for successful completion of the course is to obtain at least 50% of the maximum score.
The course is graded on the following grading scale: A – 100–90%, B – 89–80%, C – 79–70%, D – 69–60%, E – 59–50%.

Results of education:
After successfully completing the course, the student:
Knowledges:
• successfully classifies coordination and organometallic compounds and correctly determines the internal structure of such compounds;
• successfully defines the conceptual, grouping and instrumental structure of modern inorganic chemistry;
• is able to relate the structure of more complex compounds and their expected properties during chemical reactions;
• has knowledge of the basic concepts of modern chemistry from the perspective of quantum theory, so e.g. wave-particle duality, quantization of energy and states, periodic properties of elements;
• has theoretical knowledge of the chemistry of elements in an excited state.

Skills:
• is able to determine the central atom and ligands in coordinative compounds;
• derives the possible isomeric forms in coordinative compounds;
• determines the possible geometric changes occurring as a result of Jahn–Teller distortion;
• is able to determine the components contributing to the total energy in the case of simple molecules;
• has the necessary nomenclature skills to name simpler compounds;
• successfully defines simpler symmetry operations for simpler molecules;
• is able to determine the point group of simpler molecules.
Competencies:
• has creative thinking and acts independently within his own educational process;
• is able to make autonomous and responsible decisions within the framework of the chemistry course;
• is capable of independent and efficient activity.

Brief syllabus:
1. Types of chemical bonds (ionic, covalent, coordinative).
2. Crystal-field and ligand-field theory.
3. Concept of central atom and ligand.
4. Coordination number. The Jahn–Teller phenomenon.
5. Hard and soft acids, bases (Pearson).
6. Denticity and hapticity of ligands.
7. Chelates.
8. Isomery of complex compounds.
9. Nomenclature of complex compounds.
10. Classification of ligands. Isolobality.
11. The most important organometallic compounds.
12. Importance of selected organometallic compounds in catalysis.

Literature:
Greenwood, N. N., Earnshaw, A.: Az elemek kémiája II. a III. Budapest : Nemzeti Tankönyvkiadó, 2004 ISBN 963 19 5255 x
Plesch, G., Tatiersky, J.: Systematická anorganická chémia. 1 vyd. Bratislava : Omega Info, 2004 (https://fns.uniba.sk/fileadmin/prif/chem/kag/Zam-Plesch/Systemanorgchem.pdf)

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 9

A	B	C	D	E	FX
88.89	0.0	0.0	0.0	11.11	0.0

Teacher: doc. RNDr. Róbert Gyepes, PhD., Dr. habil. PaedDr. György Juhász, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ CH9/25	**Name:** The basics of colloid and surface chemistry

Types, range and methods of educational activities:
Form of study: Lecture / Seminar
Recommended extent of course (in hours):
Per week: 1 / 1 **For the study period:** 13 / 13
Methods of study: present

Number of credits: 4

Recommended semester/trimester of study: 3.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
During the semester, the student submits assignments and gives a short presentation on the chosen topic of nuclear chemistry. In addition to processing the topics (max. 8 points) for the tasks to be submitted, their submission by the deadline (max. 2 points) is also taken into account. Verbal and non-verbal expression, logical and systematic explanation, comprehensibility, eye contact, use of visual and audio-visual tools, work with literature, etc. are evaluated during the presentation.
The student gives an account of his theoretical knowledge in the form of an oral exam. The condition for participating in the exam is to hand in the assignments and deliver the short lecture during the semester.
The final evaluation of the course is calculated based on the assignments submitted by the student and the results of the exam:
0.6 x % of the points obtained from the exam part + 0.3 x % of the points obtained from the evaluation of the tasks to be submitted + 0.1 x % of the points obtained for the short presentation
Total student workload: 4 credits = 100-120 hours
- 26 hours of participation in contact classes; 13 hours of solving tasks and preparing other submissions; 13 hours of seminar work and making a presentation, 46-48 hours of independent study and preparation for the exam.
The condition for successful completion of the course is to obtain at least 50% of the maximum possible score.
The course is graded on the following grading scale: A – 100–90%, B – 89–80%, C – 79–70%, D – 69–60%, E – 59–50%.

Results of education:
After successfully completing the course, the student:
Knowledges:
• has basic knowledge at the level of understanding of the chosen chemical discipline;
• acquires knowledge about the basics of colloidal and surface chemistry, nanosystems and their practical applications;
• knows the concept of excess interfacial energy and its relationship with surface tension,
• understands the relationship between cohesion, adhesion and contact wetting

• understand the concept of adsorption and how the Gibbs equation can be derived based on interfacial thermodynamics,
• understands the basic relationships and models describing the electrical structure of interfaces
• understands the role of the size of phases and particles, the basic types of colloidal systems and their production options ,
• knows the driving force and thermodynamic description of the formation of surfactant micelles,
• understands the concept of macromolecules as thermodynamic systems and the role of interactions determining their conformation,
• knows the classical theory of colloidal stability and the behavior of colloidal systems in the presence of external mechanical and electrical fields
Skills:
• can apply the elements of logical thinking when analyzing a colloid chemical problem, can assess the relevant procedures and methods for solving theoretical problems;
• able to independently solve complex colloidal stability problems;
• can argue with basic professional and methodological knowledge in the given field;
• is able to judge the advantages and disadvantages of using different types of colloidal systems,
• is able to assess the simplest way to produce colloidal systems
• is able to interpret and explain the size dependent properties of colloids and nanoparticles in a way that is understandable to others
Competencies:
• is able to work independently with the literature, compare them and critically analyzes and presents,
• strives to understand and learn up-to-date the course material,
• open to accepting new perspectives and recognizing the limitations of existing theories,
• is characterized by creative thinking and independence in deepening one's own knowledge, while being able to work independently and efficiently.
• forms an opinion with an active and responsible attitude regarding everyday problems related to colloid and surface chemistry..

Brief syllabus:
1.Introduction to the concept of excess interfacial energy. Surface tension. Mechanical equilibrium between phases separated by a curved surface. Kelvin equation.
2. Cohesion, adhesion, contact wetting, capillary phenomena.
3. The concept of adsorption. Surface excess quantities. Gibbs equation.
4. The adsorption isotherm. The Langmuir adsorption model.
5. Electrical structure of interfaces. Origin of surface charge. Description of the diffuse electric double layer.
6. Preparation of colloidal dispersions
7. Self-assembly of surfactants and definition of the critical micelle formation concentration. Solubilization.
8. Macromolecular colloids. Statistical end-to-end distance of polymer chains. Physical states of polymers, rubber elasticity.
9. Particle-particle interactions: classical DLVO theory of colloidal stability. The concept of critical coagulating electrolyte concentration (ccc).
10. Biological and industrial applications of dispersions and nanosystems.

Literature:
Gilányi Tibor: Határfelületek. ELTE, egyetemi jegyzet, 2005. https://kgy.web.elte.hu/Tartalom/Kollidika/KolloidJegyzet_Ver1.0.pdf

Hórvölgyi Zoltán: A nanotechnológia kolloidkémiai alapjai. BME, egyetemi jegyzet2011, https://oszkdk.oszk.hu/storage/00/00/60/03/dd/1/Nanotechno_anim__ci__k_n__lk__l.pdf
Terence Cosgrove: Colloid Science: Principles, Methods and Applications, 2nd Edition ISBN: 978-1-444-32020-6, Wiley-Blackwell, 2010,
Robert J. Hunter: Foundation of Colloid Science, Clarendron Press, Oxford, 1993

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 2

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

Teacher: prof. Róbert Mészáros, DSc., Dr. habil. Imre Varga, PhD., Attila Kardos, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ DC1/25	**Name:** Introduction to didactics of chemistry

Types, range and methods of educational activities:
Form of study: Lecture / Practical
Recommended extent of course (in hours):
Per week: 2 / 2 **For the study period:** 26 / 26
Methods of study: present

Number of credits: 5

Recommended semester/trimester of study: 1.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
Lectures – oral exam from lecture topics; the exam is conditional on successful completion of exercises. During the semester, the student submits assignments.
Exercises - written test, from which the student must obtain at least 50% of points; the student submits interim assignments in which, in addition to solving tasks (max. 8 points) their submission on time (max. 2 points) is taken into account.
The result of the students' summary assessment will be calculated according to the following formula:
Final grade=(0.4 x the % of success on the oral exam) + (0.2 x % of success on the written test) + (0.4 x the % of success on the assignments).
Total student workload: 5 credits = 125-150 hours
- 52 hours of participation on lessons in present form; 26 hours solving the assigned learning tasks; 47-72 hours of self-learning and preparation for the written examination.
The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject.
90-100% is required to achieve an A grade; for grade B 80-89%; for grade C 70-79%; for D rating 60-69% and for E rating 50-59% of the total number of points.

Results of education:
The student who successfully completes the subject:
Knowledge
•has theoretical and practical knowledge of general didactics in the profile educational areas and specialization;
is able to characterize the current State Educational Programs and the "Human and nature" thematic field of education.
is able to describe the framework lesson plans for chemistry education;
• possesses extensive didactic knowledge allowing to understand the relationship between the pedagogical processes of learning and teaching of an individual
•is able to list teaching methods and forms supporting active student learning in chemistry education;
• is able to characterize strategies, methods and forms of developing the pupils' literacy within the discipline of his/her subject specialization;

• can describe the principles of teaching and effective communication in the performance of his future profession;
• is able to characterize the three-level interpretation of the description of chemistry;
• can give examples of basic difficulties in learning chemistry and explain them;
• is able to characterize the structure and content of currently valid chemistry textbooks for primary and secondary schools;
• can characterize the practical teaching of chemistry from various aspects.
• Graduate of subject understands the specifics of teaching chemistry at the levels of the lower secondary education level (i.e., third cycle with overlap into the second cycle), lower secondary vocational education, secondary vocational education, general upper secondary education, and complete upper secondary vocational education including the subject “Human and Nature” in the second cycle of primary school.
Skills:
• is able to know one´s way around generally binding legal regulations relating to the work of a teacher, pedagogical documentation, other documentation, other conceptual and strategic documents and school materials;
• has the skills of effective planning, projecting, managing and organizing the educational process in profile educational areas or specialization;
• has extensive methodological skills in profile educational areas or specialization;
• is able to transform the scientific system of the discipline into the didactic system of the subject;
• can process practical tasks and problems of chemistry in aspects of didactics;
• has practical skills in the field of laboratory activities, which he acquired as part of mandatory laboratory exercises.
• has practical knowledge of school laboratory technology, manipulation of chemical substances in the school environment, provision of chemical school experiments that serve as a basis for pedagogical practice
Competencies:
• is competent to perform the profession of a pedagogical employee, meets the requirements of the professional standard of a beginning pedagogical employee;
• is able to reflect and improve on the effectiveness of one's own teaching activity;
• can identify with his/her ownself profession;
• is able to understand the ethical, social, legal, safety and economic contexts of chemical education, and identify with them in his/her pedagogical profession;
• has an active and responsible approach to completing tasks within the subject
• Graduate of subject is prepared to teach chemistry at the third cycle of primary school and at secondary school, and is able to participate in the teaching of the subject “Human and Nature” in the second and third cycles, in cooperation with teachers of other science subjects.

Brief syllabus:

Syllabus of the Lectures:
1. Introduction to the subject. Didactics as a science discipline. The subject of didactics. Characterization of general didactics and special didactics.
2. Characteristics of science education (emphasis on chemistry education), their trends in the world and in the Slovak education system.
3. State and school educational program - characteristics of the thematic field of education: Human and nature. Framework lesson plans for chemistry education. The curriculum of chemistry education - educational standards. Cross-curricular and interdisciplinary topics. Curriculum and its structure. Thematic educational plan. Target requirements for graduation exams in chemistry.

4. Characteristics of pupils' chemical thinking. Levels of interpretation of chemistry and related learning problems. The language of chemistry and related learning problems. Misconceptions and pupils´ naive concepts of science.
5. Textbooks, teaching materials - their structure, functions.
6. Organizational forms of chemistry education and their characteristics.
7. Teaching process. Goals of the teaching process. Conditions of the teaching process. Phases of the teaching process.
8. Characteristics of current concepts and models of chemistry education. Classification of teaching methods and their characteristics. Traditional vs. constructivist methods of teaching chemistry.
9. Learning aids and didactic techniques in chemistry education and their didactic aspects.
10. Characteristics of the chemistry lesson. Teacher preparation for teaching.
Syllabus of the Exercises:
1. Generally binding legal regulations for the operation of chemical laboratories.
2. Operating regulations of the laboratory.
3. Risk evaluation of the chemical factor in cases of school laboratories.
4. Characterization of dangerous properties of chemical substances.
5. Case study of some school laboratories.
6. General rules safety of the laboratory.
7. Characteristics of practical teaching of chemistry.
8. Teacher preparation for practical teaching in a chemistry laboratory.

Literature:

Albert,S. Didaktika. Dunajská Streda: LiliumAurum, 2005. 250s. ISBN 8080622523
Balázs, K. et al. A kémiatanítás módszertana. Budapest: ELTE, 2015 (Dostupné na internete: http://pedagoguskepzes.elte.hu/images/anyagok/i3/27_Kemiatanitas_modszertana_jegyzet)
Bari, R. et al. A kémia korszerű tanítása az általános iskolában. Eger, 1978. (Dostupné na internete: https://en.mandadb.hu/common/file-servlet/document/476003/default/doc_url/a_kmia_korszer_tantsa0001.pdf)
Čapek, R. Moderní didaktika : Lexikon výukových a hodnoticích metod - 1. vyd. - Praha : Grada, 2015. - 604 s. - ISBN 978-80-247-3450-7.
Falus,I. Didaktika. - Budapest : Nemzeti Tankönyvkiadó, 2003. - 552. - ISBN 9631952967
Held, Ľ. Induktívno-Deduktívna dimenzia prírodovedného vzdelávania. - 1. vyd. - Trnava : Pedagogická fakulta Trnavskej univerzity, 2014. - 67 s. - ISBN 978-80-8082-787-8.
Petlák,E. Všeobecná didaktika.- 1. vyd. Bratislava: IRIS, 2004. 316 s. ISBN 80-89018-64-5
Radnóti, K. et al. A természettudomány tanítása: Szakmódszertani kézikönyv és tankönyv. - 1. vyd. - Szeged : Mozaik Kiadó, 2014. - 575 s. - ISBN 978 963 697 764 1.
Tóth,Z. Módszerek és eljárások 10. : Oktatási segédanyag. Debrecen : KLTE, 1998. – 170s. - ISBN 963 472 283 0.
Turek,I. Moderné trendy vo výučbe na vysokých školách.- 1. vyd. Komárno : Univerzita J. Selyeho, 2006. 496s. ISBN 80-89234-13-5
Turek,I. Základy didaktiky vysokej školy. Komárno : Selye János Egyetem, 2005. 317s. ISBN 8080733015
Turek,I. Zvyšovanie efektívnosti vyučovania. Bratislava : Metodické centrum, 1997. 316s. ISBN 8088796490
VeszprémI,L. Didaktika. - Gyula : APC-Stúdió BT., 2000. 281s. ISBN 963913530X
https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-2.stupen-zs/
https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-gymnazia-so-stvorrocnym-patrocnym-vzdelavacim-programom/

https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-gymnazia-osemrocnym-vzdelavacim-programom/
https://www.statpedu.sk/sk/maturitne-skusky/platne-od-sk-r-2018/2019/

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 12

A	B	C	D	E	FX
25.0	41.67	8.33	8.33	0.0	16.67

Teacher: Mgr. Katarína Szarka, PhD., Mgr. Andrea Vargová, PhD., Dr. habil. PaedDr. György Juhász, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ DC2/25	**Name:** Didactics of Chemistry I.
Types, range and methods of educational activities: **Form of study:** Seminar / Practical **Recommended extent of course (in hours):** **Per week:** 2 / 2 **For the study period:** 26 / 26 **Methods of study:** present	
Number of credits: 5	
Recommended semester/trimester of study: 2.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Seminar During the semester, the student submits the lessons´ preparations on selected topics and creates a portfolio from them. Within assessing portfolios, in addition to the didactic processing of the topics (max. 8 points), their submission on time (max. 2 points) is taken into account. At the end of the semester, there is an exam on the themes of the seminar. Registration for the exam is conditional upon successful completion of the exercises. Exercises During the semester, the student solves practical tasks within the subject, and processes and submits the protocol for the given laboratory tasks within one week after the laboratory exercise. Within assessing the protocols, their content and formal aspects and their submission on time are taken into account. At the end of the semester, the student has to successfully pass a written test on the topics of laboratory exercises, from which he must obtain at least 50% of the points. Participation in all exercises is mandatory, and only in case of justified absence is the missed exercise replaced individually at the end of the semester. The result of the students' summary assessment will be calculated according to the following formula: Final grade=(0.3 x the % of success on the oral exam) + (0.2 x % of success on portfolio) + (0.3 x the % of success on written test). Total student workload: 5 credits = 125-150 hours - 52 hours of participation on lessons in present form; 20 hours processing the lessons´ preparations; 13 hours processing the protocols for each laboratory task; 40-65 hours of self-learning and preparation for the written examination. The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. 90-100% is required to achieve an A grade; for grade B 80-89%; for grade C 70-79%; for D rating 60-69% and for E rating 50-59% of the total number of points.	
Results of education: The student who successfully completes the subject: Knowledge	

•has theoretical and practical knowledge of general didactics in the profile educational areas and specialization;
is able to characterize the current State Educational Programs and the "Human and nature" thematic field of education.
is able to describe the framework lesson plans for chemistry education;
• possesses extensive didactic knowledge allowing to understand the relationship between the pedagogical processes of learning and teaching of an individual
•is able to list teaching methods and forms supporting active student learning in chemistry education;
• is able to characterize strategies, methods and forms of developing the pupils' literacy within the discipline of his/her subject specialization;
• can describe the principles of teaching and effective communication in the performance of his future profession;
• is able to do a complex didactic analysis of the knowledge/skills of selected thematic units from general and inorganic chemistry at primary and secondary schools;
• Graduate of subject understands the specifics of teaching chemistry at the levels of the lower secondary education level (i.e., third cycle with overlap into the second cycle), lower secondary vocational education, secondary vocational education, general upper secondary education, and complete upper secondary vocational education including the subject “Human and Nature” in the second cycle of primary school.
Skills:
• is able to know one´s way around generally binding legal regulations relating to the work of a teacher, pedagogical documentation, other documentation, other conceptual and strategic documents and school materials;
• has the skills of effective planning, projecting, managing and organizing the educational process in profile educational areas or specialization;
• has extensive methodological skills in profile educational areas or specialization;
• is able to transform the scientific system of the discipline into the didactic system of the subject;
• can process practical tasks and problems of chemistry in aspects of didactics;
• is able to plan and organize classroom activities of pupils and groups of pupils;
• is able to define learning goals in the form of learning requirements;
• is able to analyze the content of the curriculum and identify its basic elements (facts, concepts, relationships, procedures);
• is able to determine the basic and developing curriculum of general and inorganic chemistry in the context of educational goals and individual needs of students;
• is able to select adequate examples, tasks and activities for pupils for the given topics of general and inorganic chemistry and activities for pupils;
• is able to model the teaching process and the knowledge transfer of general and inorganic chemistry at the level of primary and secondary education;
• can do self-evaluation and assess the appropriateness and feasibility of the teacher lesson preparations;
Competencies:
• is competent to perform the profession of a pedagogical employee, meets the requirements of the professional standard of a beginning pedagogical employee;
• is able to reflect and improve on the effectiveness of one's own teaching activity;
• can identify with his/her ownself profession;
• has an active and responsible approach to completing tasks within the subject.

• Graduate of subject is prepared to teach chemistry at the third cycle of primary school and at secondary school, and is able to participate in the teaching of the subject “Human and Nature” in the second and third cycles, in cooperation with teachers of other science subjects.

Brief syllabus:

1. Introduction to the subject
2. Characteristics of the goals of the chemistry subject. Characteristics of the curriculum content of general and inorganic chemistry in ISCED 2 - lower secondary education and ISCED 3A - upper secondary education.
3. Cognitive and conceptual process in the teaching of general and inorganic chemistry at all levels of education (ISCED2 and ISCED3A).
4. Didactic analysis of education curriculum and its´ interpretation on the levels of ISCED2 and ISCED3A:

• the chemistry around us and the system of substances,
• composition of substances and chemical bond,
• structure of atoms and ions and chemical bond,
• the periodic table of elements and the basics of the nomenclature of inorganic compounds,
• transformations of substances,
• chemical reactions and their processes, chemical equations, types of chemical equations,
• protolytic and oxidation-redox changes,
• metals (s-elements and d-elements) and non-metals (p-elements).

During the exercises the school chemical experiments in general and inorganic chemistry, their technique and didactics are discussed.

Literature:

Balázs, K. et al. A kémiatanítás módszertana. Budapest: ELTE, 2015 (Dostupné na internete: http://pedagoguskepzes.elte.hu/images/anyagok/i3/27_Kemiatanitas_modszertana_jegyzet)
Ganajová et al. Bádateľské aktivity v prírodovednom vzdelávaní, časť A. Bratislava: ŠPU, 2016, ISBN 978-80-8118-155-9.
Hudec, T. Didaktická príručka z Chémie pre stredné školy. Trnava: Trnavská univerzita v Trnave, 2010, ISBN 978-80-8082-368-9, (dostupné na internete: https://pdf.truni.sk/dsz/didmat/che3.pdf)
Kirjuskin, D.M. A kémia tanításának módszertana. Budapest : Tankönyvkiadó, 1963. - 404. - ISBN 0008178
Levecsenko,V.V. A kémia tanítása az iskolában. Budapest : Közoktatásügyi Kiadóvállalat, 1951. – 170s. ISBN 0009897
Radnóti, K. et al. A természettudomány tanítása: Szakmódszertani kézikönyv és tankönyv. - 1. vyd. - Szeged : Mozaik Kiadó, 2014. - 575 s. - ISBN 978 963 697 764 1.
Solárová, M. et al. Metodika výuky chemie na 2.stupni základních škol a středních školách z pohledu pedagogické praxe - náměty pro začínajícího učitele. Ostrava: Ostravská univerzita, 2010, 82s. ISBN 978-80-7368-887-5. dostupné na internete: https://projekty.osu.cz/synergie/dok/opory/solarova-metodika-vyuky-chemie-na-2-stupni-zs-a-ss.pdf
https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-2.stupen-zs/
https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-gymnazia-so-stvorrocnym-patrocnym-vzdelavacim-programom/
https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-gymnazia-osemrocnym-vzdelavacim-programom/
https://www.statpedu.sk/sk/maturitne-skusky/platne-od-sk-r-2018/2019/

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 10

A	B	C	D	E	FX
20.0	30.0	20.0	10.0	0.0	20.0

Teacher: Mgr. Katarína Szarka, PhD., Mgr. Andrea Vargová, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ DC3/25	**Name:** Didactics of Chemistry II.
Types, range and methods of educational activities: **Form of study:** Seminar / Practical **Recommended extent of course (in hours):** **Per week:** 2 / 2 **For the study period:** 26 / 26 **Methods of study:** present	
Number of credits: 5	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Seminar During the semester, the student submits the lessons´ preparations on selected topics and creates a portfolio from them. Within assessing portfolios, in addition to the didactic processing of the topics (max. 8 points), their submission on time (max. 2 points) is taken into account. At the end of the semester, there is an exam on the themes of the seminar. Registration for the exam is conditional upon successful completion of the exercises. Exercises During the semester, the student solves practical tasks within the subject, and processes and submits the protocol for the given laboratory tasks within one week after the laboratory exercise. Within assessing the protocols, their content and formal aspects and their submission on time are taken into account. At the end of the semester, the student has to successfully pass a written test on the topics of laboratory exercises, from which he must obtain at least 50% of the points. Participation in all exercises is mandatory, and only in case of justified absence is the missed exercise replaced individually at the end of the semester. The result of the students' summary assessment will be calculated according to the following formula: Final grade=(0.3 x the % of success on the oral exam) + (0.2 x % of success on portfolio) + (0.3 x the % of success on written test). Total student workload: 5 credits = 125-150 hours - 52 hours of participation on lessons in present form; 20 hours processing the lessons´ preparations; 13 hours processing the protocols for each laboratory task; 40-65 hours of self-learning and preparation for the written examination. The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. 90-100% is required to achieve an A grade; for grade B 80-89%; for grade C 70-79%; for D rating 60-69% and for E rating 50-59% of the total number of points.	
Results of education: The student who successfully completes the subject: Knowledge	

•has theoretical and practical knowledge of general didactics in the profile educational areas and specialization;
is able to characterize the current State Educational Programs and the "Human and nature" thematic field of education.
is able to describe the framework lesson plans for chemistry education;
• possesses extensive didactic knowledge allowing to understand the relationship between the pedagogical processes of learning and teaching of an individual
•is able to list teaching methods and forms supporting active student learning in chemistry education;
• is able to characterize strategies, methods and forms of developing the pupils' literacy within the discipline of his/her subject specialization;
• can describe the principles of teaching and effective communication in the performance of his future profession;
• is able to do a complex didactic analysis of the knowledge/skills of selected thematic units from onorganic chemistry and biochemistry at primary and secondary schools;
•Graduate of subject understands the specifics of teaching chemistry at the levels of the lower secondary education level (i.e., third cycle with overlap into the second cycle), lower secondary vocational education, secondary vocational education, general upper secondary education, and complete upper secondary vocational education including the subject “Human and Nature” in the second cycle of primary school.
Skills:
• has the skills of effective planning, projecting, managing and organizing the educational process in profile educational areas or specialization;
• has extensive methodological skills in profile educational areas or specialization;
• is able to transform the scientific system of the discipline into the didactic system of the subject;
• can process practical tasks and problems of chemistry in aspects of didactics;
• is able to plan and organize classroom activities of pupils and groups of pupils;
• is able to define learning goals in the form of learning requirements;
• is able to analyze the content of the curriculum and identify its basic elements (facts, concepts, relationships, procedures);
• is able to determine the basic and developing curriculum of onorganic chemistry and biochemistry in the context of educational goals and individual needs of students;
• is able to select adequate examples, tasks and activities for pupils for the given topics of onorganic chemistry and biochemistry and activities for pupils;
• is able to model the teaching process and the knowledge transfer of onorganic chemistry and biochemistry at the level of primary and secondary education;
• can do self-evaluation and assess the appropriateness and feasibility of the teacher lesson preparations;
Competencies:
• is competent to perform the profession of a pedagogical employee, meets the requirements of the professional standard of a beginning pedagogical employee;
• is able to reflect and improve on the effectiveness of one's own teaching activity;
• can identify with his/her ownself profession;
• has an active and responsible approach to completing tasks within the subject.
•Graduate of subject is prepared to teach chemistry at the third cycle of primary school and at secondary school, and is able to participate in the teaching of the subject “Human and Nature” in the second and third cycles, in cooperation with teachers of other science subjects.

Brief syllabus:
1. Introduction to the subject

2. Characteristics of the goals of the chemistry subject. Characteristics of the curriculum content of general and inorganic chemistry in ISCED 2 - lower secondary education and ISCED 3A - upper secondary education.
3. Cognitive and conceptual process in the teaching of general and inorganic chemistry at all levels of education (ISCED2 and ISCED3A).
4. Didactic analysis of education curriculum and its´ interpretation on the levels of ISCED2 and ISCED3A:
• introduction to organic chemistry and biochemistry,
• chemical bond and types of chemical bonds in organic compounds,
• isomerism, the nomenclature of organic compounds,
• reaction mechanisms of organic chemistry,
• hydrocarbons and the derivatives of hydrocarbon,
• natural sources of hydrocarbons, petroleum processing,
• biogen substances,
• metabolic processes,
• the quality of life and health.
During the exercises the school chemical experiments in general and inorganic chemistry, their technique and didactics are discussed.

Literature:

Balázs, K. et al. A kémiatanítás módszertana. Budapest: ELTE, 2015 (Dostupné na internete: http://pedagoguskepzes.elte.hu/images/anyagok/i3/27_Kemiatanitas_modszertana_jegyzet)
Kireš, M. et al. Bádateľské aktivity v prírodovednom vzdelávaní, časť A. Bratislava: ŠPU, 2016, ISBN 978-80-8118-155-9, (dostupné na internete: https://www.statpedu.sk/files/articles/nove_dokumenty/ucebnice-metodiky-publikacie/badatelske-aktivity/01cast_a_web.pdf)
Hudec, T. Didaktická príručka z Chémie pre stredné školy. Trnava: Trnavská univerzita v Trnave, 2010, ISBN 978-80-8082-368-9, (dostupné na internete: https://pdf.truni.sk/dsz/didmat/che3.pdf)
Kirjuskin, D.M. A kémia tanításának módszertana. Budapest : Tankönyvkiadó, 1963. - 404. - ISBN 0008178
Levecsenko,V.V. A kémia tanítása az iskolában. Budapest : Közoktatásügyi Kiadóvállalat, 1951. – 170s. ISBN 0009897
Radnóti, K. et al. A természettudomány tanítása: Szakmódszertani kézikönyv és tankönyv. - 1. vyd. - Szeged : Mozaik Kiadó, 2014. - 575 s. - ISBN 978 963 697 764 1.
Solárová, M. et al. Metodika výuky chemie na 2.stupni základních škol a středních školách z pohledu pedagogické praxe - náměty pro začínajícího učitele. Ostrava: Ostravská univerzita, 2010, 82s. ISBN 978-80-7368-887-5. dostupné na internete: https://projekty.osu.cz/synergie/dok/opory/solarova-metodika-vyuky-chemie-na-2-stupni-zs-a-ss.pdf
https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-2.stupen-zs/
https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-gymnazia-so-stvorrocnym-patrocnym-vzdelavacim-programom/
https://www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/inovovany-svp-gymnazia-osemrocnym-vzdelavacim-programom/
https://www.statpedu.sk/sk/maturitne-skusky/platne-od-sk-r-2018/2019/

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects

Total number of evaluated students: 9

A	B	C	D	E	FX
11.11	33.33	22.22	11.11	11.11	11.11

Teacher: Mgr. Andrea Vargová, PhD., Mgr. Katarína Szarka, PhD., Dr. habil. PaedDr. György Juhász, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ DCU/25	**Name:** Methodology of chemical tasks

Types, range and methods of educational activities:
Form of study: Seminar / Practical
Recommended extent of course (in hours):
Per week: 1 / 1 **For the study period:** 13 / 13
Methods of study: present

Number of credits: 2

Recommended semester/trimester of study: 2.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
During the semester, the student submits their solved tasks. Within the assessment of the assignments, in addition to solving tasks (max. 8 points), their submission on time (max. 2 points) is taken into account.
At the end of the subject, the student passes a comprehensive written examination, from which he must obtain at least 50% of the points.
The result of the students' summary assessment will be calculated according to the following formula:
Final grade=(1x average % of success on the assignments + 2 x % of success on the written examination) / 3.
Total student workload: 2 credits = 50-60 hours
- 26 hours of participation on lessons in present form; 13 hours solving calculation tasks and other assigned learning tasks; 11-21 hours of self-learning and preparation for the written test.
The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject.
90-100% is required to achieve an A grade; for grade B 80-89%; for grade C 70-79%; for D rating 60-69% and for E rating 50-59% of the total number of points.

Results of education:
The student who successfully completes the subject:
Knowledge
• is able to do didactic processing of school chemical tasks and create worksheets;
• has knowledge of the methodology of creating school chemistry assignments;
• possesses the supporting specific knowledge of mathematics and other natural science disciplines necessary for the application of this knowledge;
Skills
• can apply the standards of logical thinking when analyzing a chemical problem, can assess relevant procedures and methods for solving chemical calculations;
• is able to independently didactically process chemical calculation solutions;
• is able to propose alternative strategies for solving school chemical calculations;
• is capable of a comprehensive didactic analysis of the subject Chemical calculations at the educational level ISCED 2 and ISCED 3A;

• is able to model the classroom knowledge transfer from the field of chemical calculations at educational level ISCED 2 and ISCED 3A;
• is able to analyze chemical tasks in terms of learning objectives;
• is able to create a chemical task in accordance with the learning objectives;
• is able to collect tasks into thematical worksheets;
• is able to compile a set of chemical tasks to monitoring selected type of knowledge or skills and create an assessment for them;
Competencies
• is able to think creatively, and independently plan his own study;
• possesses autonomy and responsibility in decision-making in connection with the classroom teaching of chemistry;
• is able to work creatively, efficiently and independently;
• possesses abilities to perform the profession of a teacher, meets the requirements of the professional standard of a beginning pedagogical employee;
• is able to reflect and improve on the effectiveness of his own teaching activity;
• can identify with his own profession.
• is able to identify with the attitude of the teacher, whose duty is to support talented pupils as much as to support the education of pupils with learning problems or worse performance.

Brief syllabus:

1. Introduction to the subject. The role and objectives of chemical tasks in chemistry education. Mathematical apparatus and the development of mathematical competencies and logical thinking in chemistry education.
2. Characteristics of chemical tasks. Chemical problems - theoretical and practical.
3. Didactical principles of teaching chemical tasks in the classroom.
4. Tasks´ analysis of selected topics of teaching chemistry at the education level ISCED 2 and ISCED 3A, their solution and the creation of similar tasks.
5. Inquire-based learning tasks´ analysis of selected topics of teaching chemistry at the education level ISCED 2 and ISCED 3A, their solution and the creation of similar tasks.
6. Analysis of Case-study-tasks from the selected topics of teaching chemistry at the education level ISCED 2 and ISCED 3A, their solution and the creation of similar tasks.
7. Project-based learning tasks´ analysis of selected topics of teaching chemistry at the education level ISCED 2 and ISCED 3A, their solution and the creation of similar tasks.
8. Creation of worksheets/tests, evaluation keys, and chemical tasks with the purpose of summative and formative assessment. Creation of online assignments and tests.
9. Pupil's personality. Differentiation in the teaching of chemistry. Individualization and personalization in the teaching of chemistry. Access to gifted and weaker students.
10. Possibilities of developing professional competencies in teaching chemistry. Preparation of pupils for graduation exams. The structure of graduation questions fields in chemistry. Solution of graduation examples.
11. Chemical competitions. Tasks of correspondence competitions.
12. Didactic analysis and solving tasks of chemical competitions.

Literature:

Balázs, K. et al. A kémiatanítás módszertana. Budapest: ELTE, 2015 (Dostupné na internete: http://pedagoguskepzes.elte.hu/images/anyagok/i3/27_Kemiatanitas_modszertana_jegyzet)
Bárány, Zs.B. Kémia emelt szintű érettségi feladatok – számítási feladatok (Dostupné na internete: http://www.bzsb.hu/aloldalak/oktatasi-anyagok/Erettsegi/szamitasi-feladat.html)
Näser, K.H. Physikalisch-chemische Rechenaufgaben - 1. vyd. - Leipzig : VEB Deutscher Verlag, 1970. 378 s.

RÓZSAHEGYI, M, SIPOSNÉ-KEDVES, É., HORVÁTH, B. Kémia feladatgyűjtemény 11-12 : Közép- és emelt szintű érettségire készülőknek. - 4. vyd. - Szeged : Mozaik Kiadó, 2014. - 285 s. - ISBN 978 963 697 591 3.
Tóth, Z. A kémiai számítások tanításának alapjai. (dostupné na internete: http://refpedi.hu/sites/default/files/hir_kepek/Dr%20T%C3%B3th%20Zolt%C3%A1n_Sz%C3%A1m%C3%ADt%C3%A1sok%20tan%C3%ADt%C3%A1sa.pdf)
Rózsahegyi, M. Érettségi felvételi feladatok - Kémia. 1. vyd. Szeged : Mozaik Oktatási Stúdió, 1996. 144 s. ISBN 963 697 017 3
Villányi, A. Ötösöm lesz kémiából : Példatár . 1. vyd. Budapest : Novotrade Kiadó, 1990. 192 s. ISBN 963 586 093 X
Villányi, A. Ötösöm lesz kémiából : Megoldások. 1. vyd.Budapest : Novotrade Kiadó, 1990. 422 s. ISBN 963 585 093 X
https://www.iuventa.sk/olympiady-1/archiv-olympiad/
http://chem.korsem.sk/
http://www.equark.sk/index.php?cl=branch&iid=9

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 1

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

Teacher: Mgr. Katarína Szarka, PhD., Mgr. Andrea Vargová, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ DS-CH/25	**Name:** Master's Thesis Seminar
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 4	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Submission of a selected bibliography and research plan related to the topic of the thesis, and drafting of a part of the thesis (about 15 pages). Attendance at the seminar is compulsory. The student prepares part of the Master's thesis and submits the bibliography. The student must hand in a ready part of the thesis to the tutor by the deadline. If the student does not hand in the ready part of the thesis within 7 days after the deadline, he/she will not receive the credits for the course. The length of the ready part of the thesis to be handed in is determined by the tutor, the formal requirements are specified in the Rector's Directive 2/2021. The work must comply with the technical rules and ethics of citation. Criteria for the evaluation of the work: – the student's analytical-synthetic thought process, – expression of personal opinion supported by theoretical knowledge, – the definition of the problem and the aim of the work, the way in which it has been developed, – the structure of the work - logical structure and proportional length of each part, – work with literature and sources of information (how they are selected and used), – compliance with the basic formal requirements of the essay, compliance with citation requirements, – aesthetic and linguistic quality of the essay. Percentages for each task: Work done in seminars: 20 %. Seminar paper: 80 %. The student must complete at least 50 % of all assignments.	
Results of education: Knowledge: The student is able to: - list and explain the general requirements for the preparation of the Master's thesis, describe and characterize the content structure of the Master's thesis and its parts (introduction, main body, appendices),	

- explain the concepts of phenomenon and fact, list and describe ways of investigating educational phenomena,
- describe in more detail the main methods of collecting and processing the data presented in the Master's thesis,
- identify the basic requirements for the author of a thesis, describe and characterise the model, characteristics and formal structure of a thesis,
- list and explain the formal requirements for the Master's thesis,
- define the concept of an abstract, describe its structure, describe the characteristics of a quality abstract, list the most common mistakes in abstract preparation, distinguish between an abstract and an annotation, an extract, a summary and an overview,
- explain the concepts of citation, quotation, paraphrasing, compilation, plagiarism, distinguish between quotating and paraphrasing, and illustrate different citation and referencing techniques with examples,
- define and interpret in his (her) own words the basic concepts and motifs of the chosen subject area,
- be familair with the basic terms used in the thesis,
- explain thebasic terms used in an essay,
- construct (elaborate) the theoretical plane of the thesis, including all its important aspects,
- analyse and justify the conclusions of the thesis,
- critically analyse, re-evaluate and use in theory the knowledge gained.

Skills:

The student is able to:

- write a draft of his (her) own Master's thesis,
- explain the methodological rules for writing a Master's thesis,
- define the main question and the aim of the thesis, formulate hypotheses where appropriate,
- plan a timetable for the preparation of the Master's thesis, including its table of contents,
- work with literature (primary and secondary sources), search for information in library information databases,
- prepare the text of the Master's thesis, based on the knowledge acquired, by formulating ideas in a logical and precise way, producing a quality abstract, writing an introduction and conclusion, taking into account the criteria given,
- present the knowledge acquired in the field, recognising its complexity and drawing conclusions,
- apply knowledge of the ethics and techniques of citation and drafting,
- use correctly the various methods of citation and referencing and compile a bibliography correctly,
- create (develop) the practical aspects of the thesis, including all relevant aspects,
- analyse, synthesise and compare knowledge and propose solutions on this basis,
- draw conclusions and formulate practical implications through critical analysis,
- critically analyse, reassess and apply the knowledge acquired in practice,
- present, discuss and support the ideas with proper arguments, while writing the thesis,
- present, in a group of students and in the presence of the tutor, the outputs of the activity and justify their relevance and practical use,
- complete the Master's thesis and prepare for its public defence,
- to grade the strengths and weaknesses of the topic of the thesis and the thesis itself,
- critically evaluate the methods and procedures used in the thesis and make suggestions for their practical application,
- acquire independent knowledge in the chosen field,
- apply theoretical knowledge to teaching practice.

Competences:
The student
- is aware of the importance of respecting academic ethics and the ethical implications for his/her own student and future teaching activities,
- acts in accordance with the rules of good conduct,
- has mastered the basics of social appearance, and is dressed appropriately for the state examination,
- adheres to the wthical principles of citation
- expresses his/her beliefs and opinions in a straightforward and honest manner, while accepting that the other party has the right to form his/her own opinion,
- bears and accepts the consequences of his/her own actions.

Brief syllabus:

1. Requirements for the Master's thesis in the SJE guidelines.
2. A concise description of the Master's thesis.
3. The importance of the Master's thesis
4. Selection of the topic for the Master's thesis.
5. Preparation of a selected bibliography for the thesis.
6. Tasks and objectives of the Master's thesis.
7. Choosing the appropriate citation.
8. Content of the Master's thesis.
9. Formulating a strategy for the development of each part (chapter).
10. Working with reference books and journals.
11. Use of the Internet and online publications.
12. Preparing and carrying out the research, and getting ready for the defence of the Master's thesis.

Literature:

A magyar helyesírás szabályai. 2015. Budapest: Akadémiai Kiadó. 12. kiadás. ISBN 978 963 05 9631 2
Madarásová, J. (red.) 2000. Pravidlá slovenského pravopisu. Bratislava: VEDA. ISBN 8022406554
Smernica rektora č. 2/2021 o úprave, registrácii, sprístupnení a archivácii záverečných, rigoróznych a habilitačných prác na Univerzite J. Selyeho. 2021. Komárno: UJS
Majoros P.: Kutatásmódszertan: avagy: Hogyan írjunk könnyen, gyorsan jó diplomamunkát?- 1. vyd. –Budapest: Nemzeti Tankönyvkiadó, 1997. – 131 s. – ISBN9631883698.
Turek I.: Ako písať diplomovú prácu – Prešov: Metodické centrum Prešov, 1999. – 28 s. – ISBN8080451613
Chajdiak, J.: Štatistika jednoducho v Exceli. - 1. vyd. - Bratislava : Statis, 2013. - 340 s. - ISBN 978-80-85659-74-0.
Katuščák, D.: Ako písať záverečné a kvalifikačné práce. 5. vyd. - Nitra : Enigma, 2007. - 164 s. - ISBN 978-80-89132-45-4
Nagy-György, J.: Valószínűségszámítás és statisztika példatár : POLYGON Jegyzettár - 1.vyd. - Szeged : Szegedi Egyetemi Kiadó POLYGON, 2010. - 111 s.
Silverman, D.: Ako robiť kvalitatívny výskum /. - Bratislava : Ikar a.s., 2005. - 328 s. – ISBN 80-551-0904-4.
Marko J.: Ako písať záverečnú prácu. - 1. vyd. - Zvolen : TU, 2010. - 66 s. - ISBN 978-80-228-2112-4.
Murray R.: How to Write a Thesis - 3. vyd. - England : McGraw-Hill Open University Press, 2011. - 326 s. - ISBN 978-0-33-524428-7.

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 5

A	B	C	D	E	FX
80.0	0.0	0.0	0.0	0.0	20.0

Teacher: doc. RNDr. Róbert Gyepes, PhD., Mgr. Alexandra Hengerics Szabó, PhD., Dr. habil. PaedDr. György Juhász, PhD., Attila Kardos, PhD., prof. Róbert Mészáros, DSc., Mgr. Katarína Szarka, PhD., Dr. habil. Imre Varga, PhD., Mgr. Andrea Vargová, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ IKT/25	**Name:** IKT in chemistry teaching
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: During the semester the assignments submitted by the student will be evaluated. When evaluating the submitted assignments, in addition to the right solutions (for which you can get a maximum of 8 points), the submission of the assignments by the deadline is also taken into account (max. 2 points). During the semester, the student works continuously on a seminar paper written on the chosen topic of the subject. The paper must be submitted at the end of the seminar. At the end of the course, the student takes part in a written examination. In order to successfully finish the course 50 % of the maximally available points must be obtained. At the final evaluation of the course the results of the submitted assignments, the seminar paper and the written examination are taken into account. Final grade=(1 x the % expression of the performance achieved on the submitted assignments + 1 x the % expression of the performance achieved in the seminar + 1 x the % expression of the performance achieved in the written examination)/3. Total student load: 3 credits = 75-90 hours, of which - participation in 26 hours of face-to-face education; 13 hours of calculation tasks or solving other chemical tasks; 23-38 hours of independent study and preparation for the written examination.. The condition for successful completion of the course is to obtain at least 50% of the maximum score. The course is graded on the following grading scale: A – 100–90%, B – 89–80%, C – 79–70%, D – 69–60%, E – 59–50%	
Results of education: After successfully completing the subject, the student: Knowledge: ● has knowledge about the digital society related to the teaching profession and its performance; ● has knowledge of the cognitive learning process and the implementation of the learning process in the digital world; ● knows the risks of the digital world; ● knows the basic principles of the operation of ICT, the multimedia elements of software products and the operation of web 2.0 technologies; ● can compare and characterize education in a traditional school and education in the digital society;	

● can compare and characterize concepts such as communication, interactive and non-interactive communication, digitalization, globalization, information society;
● knows the challenges of the digital world, which are reflected in the teaching of chemistry;
● can characterize the basic concepts of information and communication technology and digital technology;
● knows the modern theoretical models of the learning process and the integration of ICT into the process;
● knows the possibilities of using ICT in chemistry education, as well as the possibilities of using educational software in the student's active learning process;
● knows the strategies, methods and forms for developing students' digital literacy within the subject area;
● knows the principles of effective communication in the digital world;
Skills:
● has extensive methodological abilities and skills in the field of information and communication technologies;
● independently applies appropriate work methods in the digital world;
● is able to navigate the digital information world and is able to use e-resources during his professional activities;
● is able to navigate the range of possibilities for the use of digital technology by supporting the development processes of individuals, their lifelong positive stimulation and the developmental differences of individuals resulting from health or social disadvantages;
● integrates ICT/DT into the chemistry teaching process in accordance with the ceducational content of the ŠVP ISCED 2 and ISCED 3A program;
Competencies:
● is socially committed, has socially accepted civic attitudes, has developed a positive attitude towards his profession, the target group of his professional activity and his own lifelong learning, with regard to the requirements of the digital society;
● is competent to practice the profession of a pedagogical employee, meets the requirements of the professional standards of a beginning pedagogical employee;
● is able to react and improve and perfect the effectiveness of their own educational activities in the digital society

Brief syllabus:

1. Introduction to the subject - the characterization of education in a traditional school compared to the characterization of education in a digital society (historical overview of the development of society and its transformation into a digital society, education in a digital society).
2. Basic principles of ICT operation, hardware devices and software applications, multimedia elements, web 2.0 technologies.
3. Characterization of the following concepts: communication - interactive and non-interactive digitalization, globalization, information society, digital literacy, the dangers of the digital world for school-aged children.
4. The process of information processing, the use of digital resources in education.
5. Educational theories and the digital world, the integration of ICT into educational theories, learning styles and their ICT support.
6. The ICT competences of students and teachers in education.
7. The use of ICT in chemistry education, the role of the computer in education, the concept of educational software.
8. e-Learning, e-learning materials, the possibilities of e-learning in chemistry education.
9. m-Learning, the use of mobile instruments and devices in chemistry education.
10. Integrated laboratory systems, evaluation of the results of chemical experiments.

11. Implementation of chemistry lessons with the help of ICT, forms and structure of lessons.

Literature:

Abonyi-Tóth, A., Turcsányi_Szabó, M. A mobiltechnológiával támogatott tanulás és tanítás módszerei. Educatio Társadalmi Szolgáltató Nonprofit Kft., 2015, (dostupné na internete: https://www.educatio.hu/pub_bin/download/tamop311_II/eredmenyek/m_learning/mlearning_kotet.pdf)
Cassells, D. et al. Výchova digitálnych občanov. Brusel: e-Twinning, 2016, ISBN 9789492414663, (dostupné na internete: https://www.etwinning.net/eun-files/book2016/SK_eTwinningBook.pdf)
Kalaš, Ivan et al. Premeny školy v digitálnom veku. Bratislava: SPN – Mladé letá,s.r.o.,2013. ISBN 978-80-10-02409-4. Košice: pre UIPŠ vydal elfa, s.r.o., 2010. ISBN 978-80-8086-143-8.
Lévai, D., Papp-Danka, A. Interaktív oktatásinformatika. Eger: Eszterházy Károly Főiskola, ISBN 978-615-5297-74-8, (dostupné na internete: http://www.eltereader.hu/media/2016/02/Interaktiv_Oktatasinformatika_READER.pdf)
Ollé, J. Virtualis kornyezet, virtualis oktatas. Budapest: ELTE Eötvös Kiadó, 2012, ISBN 978 963 284 283 7, (dostupné na internete: http://www.eltereader.hu/media/2013/11/Oll%C3%A9_1_kotet_READER.pdf)
Ollé, J. et al. Oktatásinformatikai módszerek: Tanítás és tanulás az információs társadalomban. Budapest: ELTE Eötvös Kiadó, 2013, ISBN 978 963 312 157 3, (dostupné na internete: http://www.eltereader.hu/media/2013/11/Olle2_okt-inform_READER.pdf)

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 9

A	B	C	D	E	FX
88.89	11.11	0.0	0.0	0.0	0.0

Teacher: Dr. habil. PaedDr. György Juhász, PhD., Mgr. Katarína Szarka, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/OB/25	**Name:** Master's Thesis and Defense
Types, range and methods of educational activities: **Form of study:** **Recommended extent of course (in hours):** **Per week: For the study period:** **Methods of study:** present	
Number of credits: 8	
Recommended semester/trimester of study: 1., 2.., 3., 4..	
Level of study: II.	
Prerequisites: KCH/CHdm/DS-CH/25	

Conditions for passing the subject:

While writing the Master's thesis, the student follows the instructions of the supervisor and the Rector's guidelines on the preparation, registration, access and archiving of Bachelor and Master's theses, dissertations and habilitation theses written at Selye János University. The recommended length of the Master's thesis is 50 to 70 pages (90000 to 126 000 characters with spaces). The deadline for submission of the Master's thesis is specified in the timetable for the academic year. The Master's thesis is checked for authenticity in the central register of final theses. A report is drawn up on the outcome.

The examination of authenticity is a prerequisite for the defence. The submission of the Master's thesis includes a licence agreement between the student and the Slovak Republic, represented by the University, on the use of digital copies of the Master's thesis.

The Master's thesis is evaluated by the supervisor and the assessor who prepare their evaluation on the basis of the criteria provided.

The supervisor mainly assesses the fulfilment of the objective, the student's autonomy and initiative in the development of the topic, the cooperation with the supervisor, the logical structure of the Master's thesis, the chosen methods and methodology, the professional quality of the thesis, the depth and quality of the development of the topic, the usefulness of the thesis, the applicability of its results, the work with literature, the relevance of the sources used, as well as the formal features, spelling, style and originality of the thesis.

The assessor focuses on the relevance and appropriateness of the topic of the thesis, the aim of the thesis and its fulfilment, the logical structure of the Master's thesis, the sequencing and division of chapters, the appropriateness of the methods and methodology used, and the professional quality of the thesis, the depth and quality of the treatment of the topic, the usefulness of the thesis, the applicability of its results, the work with the literature, the relevance of the sources used, and the formal features, spelling, style and originality of the thesis.

The examination board will assess the originality of the thesis, the degree of student involvement in the solution of the academic problem, the student's self-reliance and ability to solve the scientific problem - including the search for literature, the formulation of objectives, the choice of method, the selection of research material, the ability to evaluate, the ability to discuss the results, the summary and presentation of the results, and the relevance to the educational process, etc.

The committee will also assess the ability to present the results, including answers to questions on the topic, adherence to time constraints, etc.
The State Examination Board will evaluate the examination in an informal meeting and decide the mark. The grading is a complex assessment of the quality of the Master's thesis and its defence, taking into account the reviews and the process of thesis defence. The committee will mark the defence with an aggregate mark. The mark may be the same as, or better or worse than, the mark given in the marks, depending on the thesis defence.
The grading scale is A - 100-90%, B - 89-80%, C - 79-70%, D - 69-60%, E - 59-50%. A student who does not achieve 50% will not receive credit.
The results of the oral and theoretical part of the examination will be announced publicly by the chairperson of the board in public.

Results of education:
Knowledge:
- The student is familiar with the structure of an academic publication,
- The student can use the resources in an independent and creative way,
- The student is able to analyse and evaluate the problem under study in his/her field of research,
- The student is able to organise and apply the theoretical knowledge acquired by him (her) in teaching practice,
- The student is able to select research methods and procedures appropriately and to apply them effectively.

Skills:
- The Master's thesis demonstrates the student's knowledge of the theoretical and practical aspects of the problem under study,
- The student is able to present and defend his/her own professional viewpoints on issues related to teaching, and is able to find solutions to these problems,
- The student is able to learn independently, enabling him (her) to continue his (her) studies,
- The student is able to to understand the complexity of phenomena and to make decisions even when information is limited, including his (her) social and ethical responsibility in making decisions,
- The student is able to collect and interpret relevant data (facts) in the field of his (her) study and to make decisions that take into account social, scientific and ethical aspects,
- The student is able to support the ideas presented with arguments and to draw practical conclusions and formulate proposals,
- The student is able to present the results of the Master's thesis,
- The student is able to respect the principles of academic integrity and ethics.

Competences:
The student is able to
- express his/her own linguistic and professional culture and approach to the professional issues encountered in the course of his/her studies, in an appropriate way
- reason and apply knowledge methodologically, both theoretically and practically,
- put knowledge into practice and to organise it,
- apply his (her) knowledge in a creative way in the performance of basic tasks, furthermore, the students is able to analyse the problem and to organise new knowledge,
- answer the questions of the supervisor and the assessor to the required standard and thus be able to defend their Master's thesis successfully.

Brief syllabus:
The procedure for defending the Master's Thesis is as follows:
1. The student presents his/her thesis.

2. The main points of the thesis supervisor' and opponent's reviews are presented.
3. The student answers the questions of the supervisor and the opponent.
4. Professional discussion of the Master's Thesis, when the student answers questions.
The presentation of the Master's thesis should mainly include the following points:
1. A brief justification of the choice of topic, its relevance and practical utility.
2. Explanation of the objectives of the thesis and the methods used.
3. The main content of the thesis.
4. The conclusions and proposals drawn by the student.
A copy of the thesis and its electronic presentation are provided to the student during the presentation. The student presents the thesis on his own for a minimum of 10 minutes. He/she may use computing devices.
The final thesis is available to the committee before and during thesis defence.

Literature:
Katuščák, D. Ako písať vysokoškolské a kvalifikačné práce. Bratislava: Enigma, 2004.
Aktuálna Smernica rektora o úprave, registrácii, sprístupnení a archivácii záverečných prác na Univerzite J. Selyeho – dostupné na https://www.ujs.sk/documents/Smernica_c.2-2021o_zaverecnych_pracach_.pdf

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 4

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

Teacher:

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ PPX4/25	**Name:** Teaching Practice IV.

Types, range and methods of educational activities:
Form of study: Practical
Recommended extent of course (in hours):
Per week: For the study period: 20s
Methods of study: present

Number of credits: 2

Recommended semester/trimester of study: 2.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
The final assessment is a portfolio based on the teaching aids developed during the pedagogical practice. The conditions for the completion of the course are regulated by the Dean's Regulation entitled “The Basic Principles of Pedagogical Practice at the J. Selye University Faculty of Education”. The student is obliged to follow the sections of this document concerning active pedagogical practice (PPX4).
Mandatory parts of the portfolio:
- A protocol certifying the completion of the pedagogical practice
- Analysis of observed lessons and observation forms filled in
- Lesson plans, evaluation and analysis of the lessons taught
- Other documents and attachments related to the pedagogical practice
Assessment of the subject: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. An Fx grade may be given if the student achieves less than 50% of the total score.
Student's workload: 2 credits = 50 hours (20 hours of pedagogical practice: 5 hours of observation, 5 hours of analysis (of lessons observed), 5 hours of teaching, 5 hours of analysis (of lessons taught); 30 hours of preparation: preparation for pedagogical practice - consultation with the practice teacher, preparation for the lesson observation, preparation for the lessons to be taught, preparation of the portfolio and documentation)

Results of education:
Knowledge:
The student
- is able to observe and analyse high school and middle school activities.
- is able to evaluate and analyse activities of students of upper and middle school.
- is able to document observed upper primary and secondary school activities and activities.
- is able to consult school documents.
- is familiar with the staffing structure and facilities of the school.
- is familiar with the specific activities of the teacher during the lessons.
- knows and understands the environment, culture and organisation of primary and secondary schools.
Skills:
The student

- is able to identify different manifestations of the structural elements of personality, the psychological processes of the learner in the process of studies and in social interactions.
- is familiar with specific activities of the teacher throughout the day, in the classroom and while teaching subjects related to his/her field of specialisation in primary and secondary schools.
- can identify the teaching objectives set by the teacher, the procedures used to achieve them and the extent to which they are achieved.
- can identify various teaching methods used during the lesson.
- describes the didactic aids, communication technologies and tools used in the teaching process, as well as the possibilities of using computers, interactive whiteboards, the Internet, special educational programmes and software, dynamic systems, interactive learning materials and portals in the teaching of subjects in his/her field of specialisation.
- describes the processes of student assessment in the teaching process.
- identifies the teaching and communication style, as well as professional skills of the teacher.
- is able to process, evaluate and reflect on the results of observation in the context of educational theory.
- recognises his/her own level of competence.
- is able to identify common professional problems and to search for, formulate and solve them from a theoretical and practical background (using various practical procedures in practice).
- is able to identify gifted learners, learners with difficulties or special educational needs, disadvantaged learners, learners with multiple disadvantages, as well as learners with special needs, in order to provide them with appropriate guidance in order to enter the labour market.
- is able to prepare a didactically correct written lesson (including all necessary components such as creativity, autonomy, individualisation and alternativity.
- is able to consult the practice teacher on his/her own written preparation.
- is able to properly prepare, teach and evaluate a lesson.
- is able to document the results, as well as to professionally write reflections and self-reflections on the lesson planned, prepared, implemented and evaluated.

Competences:

The student

- takes a position on observed phenomena based on prior theoretical knowledge.
- self-reflects and receives feedback on his (her) own performance from students, colleagues and practitioners.
- presents own personality traits, communication style, values and professional skills in a responsible manner.
- gives feedback and evaluates students' learning outcomes in accordance with assessment principles for the appropriate level of teaching.
- promotes interaction between learners.
- recognises students' expressions of individuality in the context of the formal social group within the classroom, the specific features of students' learning, their particular educational needs and applies elements of differentiation in teaching.
- implements classroom teaching using teaching methods, strategies, resources and aids optimised by the disciplinary-didactic theory of her (his) field, as well as information and communication technologies.
- understands the relationship between teaching principles, consequences and learning effectiveness.
- reflects on her (his) own pedagogical skills.
- is able to develop self-awareness of the teaching profession in a targeted way.
- is able to plan independently activities that develop knowledge in the context of the teaching profession.

- is able to create the atmosphere of trust, helpfulness, encouragement, attentive acceptance, and openness, as well as to recognize and manage of the working style of others.
- optimises a good atmosphere in the learning group (school classroom) and creates a stimulating and non-threatening environment for teaching and learning by applying rules and safe working conditions, and by using proper methods to motivate and activate learners.

Brief syllabus:

Observation and evaluation of the external and internal environment of a primary and secondary school in practice.
Learning about and working with the pedagogical documentation of the class and the school.
Observation of the creation of conditions, implementation and evaluation of lessons in upper primary and secondary schools.
Carrying out a professional analysis of the lessons observed in collaboration with the practice teacher.
Documenting the process and results of each lesson observed.
Didactical procedures for the preparation of the written preparation (with all its components), consultation with the practice teacher.
Preparation of the necessary conditions for the lesson.
Implementation of the planned and prepared lesson, by using innovative strategies, as well as appropriate teaching tools from primary and secondary schools.
Evaluating the lesson, using planned and selected methods and evaluation tools from the point of view of the teacher, the students (and elements of self-evaluation).
Professional analysis done together with the student's practice teacher: preparation, documentation and evaluation of the preparation and its use, as well as other components of the lesson.
Preparation of a portfolio of the lessons observed, with all its components, based on criteria predefined by the practice teacher, using autonomy and alternativity, based on current trends in didactics.

Literature:

Štátny vzdelávací program pre 2. stupeň základnej školy v Slovenskej republike ISCED 2 – nižšie sekundárne vzdelávanie. https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced2_spu_uprava.pdf
Štátny vzdelávací program pre gymnázia v Slovenskej republike ISCED 3A – Vyššie sekundárne vzdelávanie. https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced3_spu_uprava.pdf
Zákon č. 245/2008 Z. z. – Zákon o výchove a vzdelávaní (školský zákon) a o zmene a doplnení niektorých zákonov. Bratislava : MŠ SR, 2008 (respektíve aktuálny školský zákon).
Aktuálny vnútorný predpis UJS: Zásady realizácie pedagogickej praxe na Pedagogickej fakulte UJS
Gadušová, Z. a kol.: Mentor Training : Ostrava : Ostravská univerzita, 2021. - online, 268 s. - ISBN 978-80-7599-294-9.

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:

Evaluation of subjects

Total number of evaluated students: 5

A	B	C	D	E	FX
80.0	0.0	0.0	0.0	0.0	20.0

Teacher: Mgr. Katarína Szarka, PhD., Mgr. Andrea Vargová, PhD., Dr. habil. PaedDr. György Juhász, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ PPX5/25	**Name:** Teaching Practice V.

Types, range and methods of educational activities:
Form of study: Practical
Recommended extent of course (in hours):
Per week: For the study period: 20s
Methods of study: present

Number of credits: 2

Recommended semester/trimester of study: 3.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
The final assessment is a portfolio based on the teaching aids developed during the pedagogical practice. The conditions for the completion of the course are regulated by the Dean's Regulation entitled “The Basic Principles of Pedagogical Practice at the J. Selye University Faculty of Education”. The student is obliged to follow the sections of this document concerning active pedagogical practice (PPX5).
Mandatory parts of the portfolio:
- A protocol certifying the completion of the pedagogical practice
- Analysis of observed lessons and observation forms filled in
- Lesson plans, evaluation and analysis of the lessons taught
- Other documents and attachments related to the pedagogical practice
Assessment of the subject: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. An Fx grade may be given if the student achieves less than 50% of the total score.
Student's workload: 2 credits = 50 hours (20 hours of pedagogical practice: 5 hours of observation, 5 hours of analysis (of lessons observed), 5 hours of teaching, 5 hours of analysis (of lessons taught); 30 hours of preparation: preparation for pedagogical practice - consultation with the practice teacher, preparation for the lesson observation, preparation for the lessons to be taught, preparation of the portfolio and documentation)

Results of education:
Knowledge:
The student
- is able to observe and analyse high school and middle school activities.
- is able to evaluate and analyse activities of students of upper and middle school.
- is able to document observed upper primary and secondary school activities and activities.
- is able to consult school documents.
- is familiar with the staffing structure and facilities of the school.
- is familiar with the specific activities of the teacher during the lessons.
- knows and understands the environment, culture and organisation of primary and secondary schools.
Skills:
The student

- is able to identify different manifestations of the structural elements of personality, the psychological processes of the learner in the process of studies and in social interactions.
- is familiar with specific activities of the teacher throughout the day, in the classroom and while teaching subjects related to his/her field of specialisation in primary and secondary schools.
- can identify the teaching objectives set by the teacher, the procedures used to achieve them and the extent to which they are achieved.
- can identify various teaching methods used during the lesson.
- describes the didactic aids, communication technologies and tools used in the teaching process, as well as the possibilities of using computers, interactive whiteboards, the Internet, special educational programmes and software, dynamic systems, interactive learning materials and portals in the teaching of subjects in his/her field of specialisation.
- describes the processes of student assessment in the teaching process.
- identifies the teaching and communication style, as well as professional skills of the teacher.
- is able to process, evaluate and reflect on the results of observation in the context of educational theory.
- recognises his/her own level of competence.
- is able to identify common professional problems and to search for, formulate and solve them from a theoretical and practical background (using various practical procedures in practice).
- is able to identify gifted learners, learners with difficulties or special educational needs, disadvantaged learners, learners with multiple disadvantages, as well as learners with special needs, in order to provide them with appropriate guidance in order to enter the labour market.
- is able to prepare a didactically correct written lesson (including all necessary components such as creativity, autonomy, individualisation and alternativity.
- is able to consult the practice teacher on his/her own written preparation.
- is able to properly prepare, teach and evaluate a lesson.
- is able to document the results, as well as to professionally write reflections and self-reflections on the lesson planned, prepared, implemented and evaluated.

Competences:

The student

- takes a position on observed phenomena based on prior theoretical knowledge.
- self-reflects and receives feedback on his (her) own performance from students, colleagues and practitioners.
- presents own personality traits, communication style, values and professional skills in a responsible manner.
- gives feedback and evaluates students' learning outcomes in accordance with assessment principles for the appropriate level of teaching.
- promotes interaction between learners.
- recognises students' expressions of individuality in the context of the formal social group within the classroom, the specific features of students' learning, their particular educational needs and applies elements of differentiation in teaching.
- implements classroom teaching using teaching methods, strategies, resources and aids optimised by the disciplinary-didactic theory of her (his) field, as well as information and communication technologies.
- understands the relationship between teaching principles, consequences and learning effectiveness.
- reflects on her (his) own pedagogical skills.
- is able to develop self-awareness of the teaching profession in a targeted way.
- is able to plan independently activities that develop knowledge in the context of the teaching profession.

- is able to create the atmosphere of trust, helpfulness, encouragement, attentive acceptance, and openness, as well as to recognize and manage of the working style of others.
- optimises a good atmosphere in the learning group (school classroom) and creates a stimulating and non-threatening environment for teaching and learning by applying rules and safe working conditions, and by using proper methods to motivate and activate learners.

Brief syllabus:

Observation and evaluation of the external and internal environment of a primary and secondary school in practice.
Learning about and working with the pedagogical documentation of the class and the school.
Observation of the creation of conditions, implementation and evaluation of lessons in upper primary and secondary schools.
Carrying out a professional analysis of the lessons observed in collaboration with the practice teacher.
Documenting the process and results of each lesson observed.
Didactical procedures for the preparation of the written preparation (with all its components), consultation with the practice teacher.
Preparation of the necessary conditions for the lesson.
Implementation of the planned and prepared lesson, by using innovative strategies, as well as appropriate teaching tools from primary and secondary schools.
Evaluating the lesson, using planned and selected methods and evaluation tools from the point of view of the teacher, the students (and elements of self-evaluation).
Professional analysis done together with the student's practice teacher: preparation, documentation and evaluation of the preparation and its use, as well as other components of the lesson.
Preparation of a portfolio of the lessons observed, with all its components, based on criteria predefined by the practice teacher, using autonomy and alternativity, based on current trends in didactics.

Literature:

Štátny vzdelávací program pre 2. stupeň základnej školy v Slovenskej republike ISCED 2 – nižšie sekundárne vzdelávanie. https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced2_spu_uprava.pdf
Štátny vzdelávací program pre gymnázia v Slovenskej republike ISCED 3A – Vyššie sekundárne vzdelávanie. https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced3_spu_uprava.pdf
Zákon č. 245/2008 Z. z. – Zákon o výchove a vzdelávaní (školský zákon) a o zmene a doplnení niektorých zákonov. Bratislava : MŠ SR, 2008 (respektíve aktuálny školský zákon).
Aktuálny vnútorný predpis UJS: Zásady realizácie pedagogickej praxe na Pedagogickej fakulte UJS
Gadušová, Z. a kol.: Mentor Training : Ostrava : Ostravská univerzita, 2021. - online, 268 s. - ISBN 978-80-7599-294-9.

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:

Evaluation of subjects

Total number of evaluated students: 6

A	B	C	D	E	FX
50.0	16.67	33.33	0.0	0.0	0.0

Teacher: Mgr. Katarína Szarka, PhD., Mgr. Andrea Vargová, PhD., Dr. habil. PaedDr. György Juhász, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ PPX6/25	**Name:** Teaching Practice VI.

Types, range and methods of educational activities:
Form of study: Practical
Recommended extent of course (in hours):
Per week: For the study period: 40s
Methods of study: present

Number of credits: 4

Recommended semester/trimester of study: 4.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
The final assessment is a portfolio based on the teaching aids developed during the pedagogical practice. The conditions for the completion of the course are regulated by the Dean's Regulation entitled “The Basic Principles of Pedagogical Practice at the J. Selye University Faculty of Education”. The student is obliged to follow the sections of this document concerning active pedagogical practice (PPX6).
Mandatory parts of the portfolio:
- A protocol certifying the completion of the pedagogical practice
- Analysis of observed lessons and observation forms filled in
- Lesson plans, evaluation and analysis of the lessons taught
- Other documents and attachments related to the pedagogical practice
Assessment of the subject: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. An Fx grade may be given if the student achieves less than 50% of the total score.
Student's workload: 2 credits = 50 hours (20 hours of pedagogical practice: 5 hours of observation, 5 hours of analysis (of lessons observed), 5 hours of teaching, 5 hours of analysis (of lessons taught); 30 hours of preparation: preparation for pedagogical practice - consultation with the practice teacher, preparation for the lesson observation, preparation for the lessons to be taught, preparation of the portfolio and documentation)

Results of education:
Knowledge:
The student
- is able to observe and analyse high school and middle school activities.
- is able to evaluate and analyse activities of students of upper and middle school.
- is able to document observed upper primary and secondary school activities and activities.
- is able to consult school documents.
- is familiar with the staffing structure and facilities of the school.
- is familiar with the specific activities of the teacher during the lessons.
- knows and understands the environment, culture and organisation of primary and secondary schools.
Skills:
The student

- is able to identify different manifestations of the structural elements of personality, the psychological processes of the learner in the process of studies and in social interactions.
- is familiar with specific activities of the teacher throughout the day, in the classroom and while teaching subjects related to his/her field of specialisation in primary and secondary schools.
- can identify the teaching objectives set by the teacher, the procedures used to achieve them and the extent to which they are achieved.
- can identify various teaching methods used during the lesson.
- describes the didactic aids, communication technologies and tools used in the teaching process, as well as the possibilities of using computers, interactive whiteboards, the Internet, special educational programmes and software, dynamic systems, interactive learning materials and portals in the teaching of subjects in his/her field of specialisation.
- describes the processes of student assessment in the teaching process.
- identifies the teaching and communication style, as well as professional skills of the teacher.
- is able to process, evaluate and reflect on the results of observation in the context of educational theory.
- recognises his/her own level of competence.
- is able to identify common professional problems and to search for, formulate and solve them from a theoretical and practical background (using various practical procedures in practice).
- is able to identify gifted learners, learners with difficulties or special educational needs, disadvantaged learners, learners with multiple disadvantages, as well as learners with special needs, in order to provide them with appropriate guidance in order to enter the labour market.
- is able to prepare a didactically correct written lesson (including all necessary components such as creativity, autonomy, individualisation and alternativity.
- is able to consult the practice teacher on his/her own written preparation.
- is able to properly prepare, teach and evaluate a lesson.
- is able to document the results, as well as to professionally write reflections and self-reflections on the lesson planned, prepared, implemented and evaluated.

Competences:

The student

- takes a position on observed phenomena based on prior theoretical knowledge.
- self-reflects and receives feedback on his (her) own performance from students, colleagues and practitioners.
- presents own personality traits, communication style, values and professional skills in a responsible manner.
- gives feedback and evaluates students' learning outcomes in accordance with assessment principles for the appropriate level of teaching.
- promotes interaction between learners.
- recognises students' expressions of individuality in the context of the formal social group within the classroom, the specific features of students' learning, their particular educational needs and applies elements of differentiation in teaching.
- implements classroom teaching using teaching methods, strategies, resources and aids optimised by the disciplinary-didactic theory of her (his) field, as well as information and communication technologies.
- understands the relationship between teaching principles, consequences and learning effectiveness.
- reflects on her (his) own pedagogical skills.
- is able to develop self-awareness of the teaching profession in a targeted way.
- is able to plan independently activities that develop knowledge in the context of the teaching profession.

- is able to create the atmosphere of trust, helpfulness, encouragement, attentive acceptance, and openness, as well as to recognize and manage of the working style of others.
- optimises a good atmosphere in the learning group (school classroom) and creates a stimulating and non-threatening environment for teaching and learning by applying rules and safe working conditions, and by using proper methods to motivate and activate learners.

Brief syllabus:

Observation and evaluation of the external and internal environment of a primary and secondary school in practice.
Learning about and working with the pedagogical documentation of the class and the school.
Observation of the creation of conditions, implementation and evaluation of lessons in upper primary and secondary schools.
Carrying out a professional analysis of the lessons observed in collaboration with the practice teacher.
Documenting the process and results of each lesson observed.
Didactical procedures for the preparation of the written preparation (with all its components), consultation with the practice teacher.
Preparation of the necessary conditions for the lesson.
Implementation of the planned and prepared lesson, by using innovative strategies, as well as appropriate teaching tools from primary and secondary schools.
Evaluating the lesson, using planned and selected methods and evaluation tools from the point of view of the teacher, the students (and elements of self-evaluation).
Professional analysis done together with the student's practice teacher: preparation, documentation and evaluation of the preparation and its use, as well as other components of the lesson.
Preparation of a portfolio of the lessons observed, with all its components, based on criteria predefined by the practice teacher, using autonomy and alternativity, based on current trends in didactics.

Literature:

Štátny vzdelávací program pre 2. stupeň základnej školy v Slovenskej republike ISCED 2 – nižšie sekundárne vzdelávanie. https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced2_spu_uprava.pdf
Štátny vzdelávací program pre gymnázia v Slovenskej republike ISCED 3A – Vyššie sekundárne vzdelávanie. https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced3_spu_uprava.pdf
Zákon č. 245/2008 Z. z. – Zákon o výchove a vzdelávaní (školský zákon) a o zmene a doplnení niektorých zákonov. Bratislava : MŠ SR, 2008 (respektíve aktuálny školský zákon).
Aktuálny vnútorný predpis UJS: Zásady realizácie pedagogickej praxe na Pedagogickej fakulte UJS
Gadušová, Z. a kol.: Mentor Training : Ostrava : Ostravská univerzita, 2021. - online, 268 s. - ISBN 978-80-7599-294-9.

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:

Evaluation of subjects

Total number of evaluated students: 8

A	B	C	D	E	FX
75.0	25.0	0.0	0.0	0.0	0.0

Teacher: Mgr. Katarína Szarka, PhD., Mgr. Andrea Vargová, PhD., Dr. habil. PaedDr. György Juhász, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ RDC/25	**Name:** Development of pupils´ learning process in chemistry education

Types, range and methods of educational activities:
Form of study: Seminar / Practical
Recommended extent of course (in hours):
Per week: 1 / 1 **For the study period:** 13 / 13
Methods of study: present

Number of credits: 2

Recommended semester/trimester of study: 2.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
During the semester, the student submits their solved tasks. Within the assessment of the assignments, in addition to solving tasks (max. 8 points), their submission on time (max. 2 points) is taken into account.
At the end of the subject, the student passes a comprehensive written examination, from which he must obtain at least 50% of the points.
The result of the students' summary assessment will be calculated according to the following formula:
Final grade=(1x average % of success on the assignments + 2 x % of success on the written examination) / 3.
Total student workload: 2 credits = 50-60 hours
- 26 hours of participation on lessons in present form; 13 hours solving calculation tasks and other assigned learning tasks; 11-21 hours of self-learning and preparation for the written test.
The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject.
90-100% is required to achieve an A grade; for grade B 80-89%; for grade C 70-79%; for D rating 60-69% and for E rating 50-59% of the total number of points.

Results of education:
The student who successfully completes the subject:
Knowledge
• is able to do didactic processing of school chemical tasks and create worksheets;
• has knowledge of the methodology of creating school chemistry assignments;
• possesses the supporting specific knowledge of mathematics and other natural science disciplines necessary for the application of this knowledge;
Skills
• can apply the standards of logical thinking when analyzing a chemical problem, can assess relevant procedures and methods for solving chemical calculations;
• is able to independently didactically process chemical calculation solutions;
• is able to propose alternative strategies for solving school chemical calculations;
• is capable of a comprehensive didactic analysis of the subject Chemical calculations at the educational level ISCED 2 and ISCED 3A;

• is able to model the classroom knowledge transfer from the field of chemical calculations at educational level ISCED 2 and ISCED 3A;
• is able to analyze chemical tasks in terms of learning objectives;
• is able to create a chemical task in accordance with the learning objectives;
• is able to collect tasks into thematical worksheets;
• is able to compile a set of chemical tasks to monitoring selected type of knowledge or skills and create an assessment for them;
Competencies:
• is able to think creatively, and independently plan his own study;
• possesses autonomy and responsibility in decision-making in connection with the classroom teaching of chemistry;
• is able to work creatively, efficiently and independently;
• possesses abilities to perform the profession of a teacher, meets the requirements of the professional standard of a beginning pedagogical employee;
• is able to reflect and improve on the effectiveness of his own teaching activity;
• can identify with his own profession.
• is able to identify with the attitude of the teacher, whose duty is to support talented pupils as much as to support the education of pupils with learning problems or worse performance.

Brief syllabus:

1. Introduction to the subject. Pupil's personality. Differentiation in the teaching of chemistry. Individualization and personalization in the teaching of chemistry. Access to gifted and weaker pupils.
2. The role and objectives of chemical tasks in chemistry education. Mathematical apparatus and the development of mathematical competencies and logical thinking in chemistry education.
3. Characteristics of chemical tasks. Chemical problems - theoretical and practical.
4. Didactical principles of teaching chemical tasks in the classroom.
5. Tasks´ analysis of selected topics of teaching chemistry at the education level ISCED 2 and ISCED 3A, their solution and the creation of similar tasks.
6. Inquire-based learning tasks´ analysis of selected topics of teaching chemistry at the education level ISCED 2 and ISCED 3A, their solution and the creation of similar tasks.
7. Analysis of Case-study-tasks from the selected topics of teaching chemistry at the education level ISCED 2 and ISCED 3A, their solution and the creation of similar tasks.
8. Project-based learning tasks´ analysis of selected topics of teaching chemistry at the education level ISCED 2 and ISCED 3A, their solution and the creation of similar tasks.
9. Creation of worksheets/tests, evaluation keys, and chemical tasks with the purpose of summative and formative assessment. Creation of online assignments and tests.
10. Possibilities of developing professional competencies in teaching chemistry. Preparation of pupils for graduation exams. The structure of graduation questions fields in chemistry. Solution of graduation examples.
11. Chemical competitions. Tasks of correspondence competitions.
12. Didactic analysis and solving tasks of chemical competitions.

Literature:

Balázs, K. et al. A kémiatanítás módszertana. Budapest: ELTE, 2015 (Dostupné na internete: http://pedagoguskepzes.elte.hu/images/anyagok/i3/27_Kemiatanitas_modszertana_jegyzet)
Bárány, Zs.B. Kémia emelt szintű érettségi feladatok – számítási feladatok (Dostupné na internete: http://www.bzsb.hu/aloldalak/oktatasi-anyagok/Erettsegi/szamitasi-feladat.html)
Näser, K.H. Physikalisch-chemische Rechenaufgaben - 1. vyd. - Leipzig : VEB Deutscher Verlag, 1970. 378 s.

RÓZSAHEGYI, M, SIPOSNÉ-KEDVES, É., HORVÁTH, B. Kémia feladatgyűjtemény 11-12 : Közép- és emelt szintű érettségire készülőknek. - 4. vyd. - Szeged : Mozaik Kiadó, 2014. - 285 s. - ISBN 978 963 697 591 3.
Tóth, Z. A kémiai számítások tanításának alapjai. (dostupné na internete: http://refpedi.hu/sites/default/files/hir_kepek/Dr%20T%C3%B3th%20Zolt%C3%A1n_Sz%C3%A1m%C3%ADt%C3%A1sok%20tan%C3%ADt%C3%A1sa.pdf)
Rózsahegyi, M. Érettségi felvételi feladatok - Kémia. 1. vyd. Szeged : Mozaik Oktatási Stúdió, 1996. 144 s. ISBN 963 697 017 3
Villányi, A. Ötösöm lesz kémiából : Példatár . 1. vyd. Budapest : Novotrade Kiadó, 1990. 192 s. ISBN 963 586 093 X
Villányi, A. Ötösöm lesz kémiából : Megoldások. 1. vyd.Budapest : Novotrade Kiadó, 1990. 422 s. ISBN 963 585 093 X
https://www.iuventa.sk/olympiady-1/archiv-olympiad/
http://chem.korsem.sk/
http://www.equark.sk/index.php?cl=branch&iid=9

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 9

A	B	C	D	E	FX
33.33	0.0	22.22	22.22	0.0	22.22

Teacher: Mgr. Katarína Szarka, PhD., Mgr. Andrea Vargová, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ STV/25	**Name:** Modern trends in chemistry education
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: During the semester, the student submits their solved tasks. Within the assessment of the assignments, in addition to solving tasks (max. 8 points), their submission on time (max. 2 points) is taken into account. At the end of the subject, the student passes a comprehensive written examination, from which he must obtain at least 50% of the points. The result of the students' summary assessment will be calculated according to the following formula: Final grade=(1x average % of success on the assignments + 2 x % of success on the written examination) / 3. Total student workload: 1 credit = 25-30 hours - 26 hours of participation on lessons in present form; 4 hours solving calculation tasks and other assigned learning tasks; and self-learning. The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. 90-100% is required to achieve an A grade; for grade B 80-89%; for grade C 70-79%; for D rating 60-69% and for E rating 50-59% of the total number of points.	
Results of education: The student who successfully completes the subject: Knowledge • is able to name and characterize several teaching methods and forms supporting active student learning; • is able to explain the impact of verbal and non-verbal communication on the classroom climate; • is able to describe psychological aspects of motivation and motive; • is able to list and characterize the forms, methods and strategies of motivation and activation within the profile subject; • is able to apply the principles of effective communication supporting active student learning; • is able to characterize the philosophical and methodological starting points, forms and types of student assessment and their psychodidactic aspects; • possesses the theoretical foundations of assessment and feedback; • is able to provide an overview of new trends in assessment in education;	

• has knowledge of methodological instructions and rules regarding the assessment and classification of pupils;
• is able to adequately apply and integrate diverse assessments in chemistry education;
Skills
• has the skills of effective planning, projecting, managing and organizing the educational process in profile educational areas or specialization;
• is ready to plan and manage educational activities and learning of a group of pupils and the whole class;
• is able to select appropriate tasks for the given topics, which motivate students to take action in their learning process and support their active learning;
• is able to independently and adequately implement pedagogical evaluation;
• is capable of self-evaluation and thus ensuring monitoring of his/her professional development;
• is able to evaluate pupils with regard to their developmental and individual characteristics;
• is able to apply various forms and methods of assessment;
• is able due to reflection to evaluate the teaching process in comparison with the projected teaching process and to make the necessary corrections;
• is able to evaluate pupils without prejudices and stereotypes;
• is able to apply the above in practice when creating models for chemistry lessons;
Competencies
• is able to think creatively, and independently plan his own study;
• possesses autonomy and responsibility in decision-making in connection with the classroom teaching of chemistry;
• is capable of implementing educational diagnostic and evaluation processes;
• possesses abilities to perform the profession of a teacher, meets the requirements of the professional standard of a beginning pedagogical employee;
• is able to reflect and improve on the effectiveness of his own teaching activity;
• is able to work creatively, efficiently and independently;
• can identify with his own profession.

Brief syllabus:

The course focuses on the trends of two main areas of teaching chemistry:
1. Constructivist concepts of chemistry education:
• Trends in the teaching of chemistry. Competence-based learning teaching of chemistry. Developing pupils' competencies through learning tasks.
• Problem teaching in the context of chemistry teaching.
• Inquiry-based learning in the context of chemistry teaching.
• The role of teacher and learner in the constructivist learning process.
• Characteristics of project management in education. Project method. Project-based learning in the context of chemistry teaching.
• Characteristics of cooperative learning. Application of cooperative learning in the context of chemistry teaching.
2. Current concepts of school assessment
• Self-regulating learning and reflection-based learning.
• Basic concepts of evaluation - forms and methods of evaluation. Classification.
• Functions and general principles of evaluation.
• Current trends of classroom assessment.
• The type of learning outcomes in the subject of chemistry and the way of collecting the learning evidence.
• The concept of portfolio/e-portfolio and its role and possibilities in chemistry education.
• Authentic assessment strategies and tools.

• Description and characterization of the pedagogical terms: assessment for/of/as learning and their types. Assessment strategies and tools in chemistry education and the possibilities of their implementation in the practice of the chemistry teachers.
• Characteristics of self-reflection, peer assessment, group assessment, metacognitive assessment and implementation of their strategies and tools.

Literature:

Garai, I., Vincze,B., Szabó,Z.A. Hiteles pedagógia. Budapest: ELTE Eötvös Kiadó, 2016. 126s. ISBN 978-963-284-828-0. Dostupné na internete: http://www.eltereader.hu/media/2016/11/Hiteles_pedagogia_Golnhofer_READER1.pdf
Gavora, P. Akí sú moji žiaci? - 3. vyd. - Nitra : Enigma, 2011. - 222 s. - ISBN 978-80-89132-91-1.
Károly, K & Homonnay, Z. Diszciplínák tanítása – a tanítás diszciplínái 4. - A tanulás és tanítás értékelése. Budapest: ELTE Eötvös Kiadó, 2017. 356s. ISBN 978-963-284-909-6. Dostupné na internete: http://www.eltereader.hu/media/2017/07/Diszciplinak_4_READER.pdf
Slavík, J. Hodnocení v současné škole : Východiska a nové metodypro praxi. - 1. vyd. - Praha : Portál, 1999. - 190 s. - ISBN 80-7178-262-9
Turek, I. Zvyšovanie efektívnosti vyučovania. Bratislava : Metodické centrum, 1997. 316s. ISBN 8088796490
Vidákovich, T. Diagnosztikus pedagógiai értékelés. Budapest : AkadémiaiKiadó, 1990. 232. ISBN 9630559676
Zelina, M. Stratégie a metódy rozvoja osobnosti : Metódy výchovy. 2. vyd. - Bratislava : Iris, 1996. - 234 s. - ISBN 80-967013-4-7
Starý, K. & Laufková, V. a kol. Formativní hodnotení ve výuce - 1. vyd. - Praha : Portál, 2016. - 175 s. - ISBN 978-80-262-1001-6.
Szarka, K. Súčasné trendy školského hodnotenia: Koncepcia rozvíjajúceho hodnotenia. 1. vyd. Komárom: Kompress, 2017. 147 s. ISBN 978-963-12-9692-1.

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 0

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

Teacher: Mgr. Andrea Vargová, PhD., Mgr. Katarína Szarka, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHdm/ŠS/25	**Name:** Chemistry and Methodology of Teaching
Types, range and methods of educational activities: **Form of study:** **Recommended extent of course (in hours):** **Per week: For the study period:** **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 1., 2.., 3., 4..	
Level of study: II.	
Prerequisites: KCH/CHdm/CH7/25 and KCH/CHdm/DC1/25 and KCH/CHdm/CH8/25 and KCH/CHdm/DC2/25 and KCH/CHdm/CH9/25 and KCH/CHdm/DC3/25 and KCH/CHdm/PPX6/25	
Conditions for passing the subject: All students who have met the requirements of the programme of study in the final year of their studies may take the state examination at the regular time according to the study schedule. In the oral state examination, the student gives an account of his/her knowledge and skills in his/her field of specialisation and the interdisciplinary connection with the relevant fields of specialisation. He/she demonstrates the ability to select the content of education in accordance with the required and expected educational objectives and to enrich it with school and regional characteristics. The student demonstrates the ability to communicate information, ideas, problems and solutions to professional and lay audience. The state examination takes the form of a colloquium in which the student's performance is assessed on a scale from A to FX. The grade counts for the overall state examination grade. The oral examination is graded on the following scale: A - 100-90%, B - 89-80%, C - 79-70%, D - 69-60%, E - 59-50%. A student who fails to achieve 50% receives no credit. The results of the state examination and the thesis defence are publicly announced by the chair of the board.	
Results of education: Knowledge: - the student has acquired knowledge in the compulsory and profile subjects of the study programme, - the student is able to define and interpret basic concepts in his/her own words, to explain and describe basic processes, to characterise and to apply academic methods of research in the areas indicated in the subject's thematic plan, - the student is able to analyse and evaluate the knowledge acquired in the subject. - be able to characterise the concept of teaching, to list the different types of teaching and to describe the framework for teaching and learning for 11-19 year olds. Skills: - the student is able to present his/her expertise, - the student is able to hand over his/her knowledge	

- the student is able to organise and apply the theoretical knowledge acquired in practical teaching activities,
- the student can select and apply teaching procedures appropriately,
- the student is able to guide the learner in the acquisition of knowledge, taking into account the individual needs of the learner,
- the student has the ability to organise and apply the knowledge acquired in the course of his (her) studies.
Competences:
- the student is able to express his/her linguistic and professional culture in the oral examination,
- the student is able to use the knowledge acquired in a wider context,
- the student is able to put the knowledge acquired into practice and organise it,
- the student is able to use his/her knowledge in a creative way while solving problems, as well as to analyse the problem and organise new solutions,
- the student is able to answer the questions of the committee at the expected level.

Brief syllabus:
I. General didactics of chemistry
II. Selected chapters of chemistry didactics
III. Selected chapters of chemistry

Literature:
Literature indicated in the information sheets of the study programme

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 8

A	B	C	D	E	FX
37.5	25.0	12.5	25.0	0.0	0.0

Teacher:

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHm/ MOB1-CH/25	**Name:** Student mobility related to graduate profile - Teaching of chemistry
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study:	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Total student workload: 3 credits = 75–90 hours 26 hours participation in contact hours; 20 hours preparation of the educational activity project and assignments given during lessons; 35–45 hours self-study and preparation of a brief reflection or report on the acquired experiences and knowledge in relation to the graduate's profile. The course is completed in the form of "passed" (without a grade), based on the fulfilment of the above conditions. The course completion is recorded in AIS by the academic responsible person (ZOŠP) after verifying that the conditions have been met.	
Results of education: Knowledge: - The student acquires an overview of subject-specific topics that broaden or complement their graduate profile in an international and intercultural context. - They acquire knowledge gained during mobility that is not directly part of their study plan but is relevant to their field of expertise. - They understand how professional knowledge is applied in various academic or work environments abroad. Skills: - The student is able to apply the knowledge acquired during mobility in further studies or professional practice. - They can communicate and collaborate in an international team, in a foreign language, and in a culturally diverse environment. - They are capable of reflecting on their own educational needs and adapting to new academic or professional settings. Competences: - The student develops competences necessary for lifelong learning, flexibility, and adaptability. - They strengthen their ability to actively participate in international educational activities and projects.	

- They increase their level of independence, responsibility, and initiative in solving tasks outside their domestic academic environment.

Brief syllabus:
- Introduction to the subject, the importance of academic mobility and the internationalisation of higher education.
- Professional seminars by a foreign university teacher in line with the graduate profile. International approaches and current trends in the field. Intercultural communication and working in an international academic environment.
- Reflection of the student on the knowledge, skills and experience gained from the teaching conducted by a foreign university teacher.
- Discussion and feedback - relevance of the knowledge gained for further study and professional development.

Literature:
Literature as recommended by the university teacher involved in the mobility programme.

Language, knowledge of which is necessary to complete a course:
English, Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 0

a	n
0.0	0.0

Teacher:

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KCH/CHm/ MOB2-CH/25	**Name:** Experience equivalent to academic mobility - Teaching of chemistry
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study:	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Total student workload: 3 credits = 75–90 hours 26 hours participation in contact hours; 20 hours preparation of the educational activity project and assignments given during lessons; 35–45 hours self-study and preparation of a brief reflection or report on the acquired experiences and knowledge in relation to the graduate's profile. The course is completed in the form of "passed" (without a grade), based on the fulfilment of the above conditions. The course completion is recorded in AIS by the academic responsible person (ZOŠP) after verifying that the conditions have been met.	
Results of education: Knowledge: - The student acquires subject-specific knowledge in line with the graduate profile, delivered by a foreign academic staff member in an international context. - The student becomes familiar with various approaches, concepts, and methods used in foreign academic and research environments. - The student gains an overview of current trends and findings in the relevant field from an international perspective. Skills: - The student is able to communicate and work in a foreign language, developing their language and intercultural communication skills. - The student can actively apply the acquired knowledge in their own academic and professional context. - The student develops the ability to critically analyse and apply new insights from the international academic environment. - The student enhances the ability to integrate new knowledge from international research into their own research or practice. Competences: - The student strengthens their ability to navigate the international academic environment and actively participate in it.	

- The student improves their adaptability, independence, and flexibility when studying in an intercultural environment.
- The student develops openness to diverse professional and cultural approaches, as well as the ability to work both independently and as part of a team.

Brief syllabus:
- Introduction to the subject, the importance of academic mobility and the internationalisation of higher education.
- Professional seminars by a foreign university teacher in line with the graduate profile. International approaches and current trends in the field. Intercultural communication and working in an international academic environment.
- Reflection of the student on the knowledge, skills and experience gained from the teaching conducted by a foreign university teacher.
- Discussion and feedback - relevance of the knowledge gained for further study and professional development.

Literature:
Literature as recommended by the university teacher involved in the mobility programme.

Language, knowledge of which is necessary to complete a course:
English, Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 0

a	n
0.0	0.0

Teacher:

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ DBA/25	**Name:** Database application development
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: During the semester, students solve practical problems for which they can get 50 points. At the end of the semester, students will complete a term project for which they may receive 50 points. To obtain grade „A“ students have to obtain minimum 90% of the total score, to obtain grade „B“ students have to obtain 80% of the total score, to obtain grade „C“ students have to obtain 70% of the total score, to obtain grade „D“ students have to obtain 60% of the total score, to obtain grade „E“ students have to obtain 50% of the total score. There is no credit for the subject if a student obtains less than 50%.	
Results of education: Knowledge: Upon successful completion of the course, students will get to know the principles and creation of dynamic websites. Students will learn to control the Visual Studio CODE development environment, .Net (core), SQLite and use these environments to create simple information systems. They also will get information about the possibilities of their use, their advantages and disadvantages, as well as about professional terminology in this field. Skills: Students will be able to create a web application with a connection to a database system. Students will be able to establish a connection between a client and a server using standard REST commands (GET, PUT, WebSocket). Students will learn common application patterns such as login, user management, remembering login in the browser. Students will be able to design independently web application architecture, implement the server and client parts as well as implement communication protocols between components. Competencies: The student is able to create interactive web applications. The student can use gained skills as a web developer, as a developer of a complete web solution (full-stack developer), as a developer of web database solutions, administrative pages or company websites. The student can also use his skills as a system developer to visualize information, to create information aggregations and to represent information.	
Brief syllabus: 1. Design pattern model-representation-control. Working with .NET (Core). Creating a basic web, webapi and mvc project. Creating a simple web page.	

2. Query information from the client from the server using a GET query. Query parameters and usage examples.
3. Querying information from the client from the server using a POST type query. Query parameters and usage examples.
4. Checking the client from the server. Propagation of information and events from server to client. System of communication using unfinished queries (long polling).
5. Checking the client from the server. WebSocket communication.
6. Checking the client from the server. Communication using SignalR.
7. Uploading files. Sending files to the server.
8. Storing information on the client side using cookies.
9. SQLite as a nested database.
10. Connecting the .Net (Core) system to the SQLite database.
11. Creating a web connection using control object annotation.
12. JSon container format for web communication
13. Sending objects between client and server in JSon format

Literature:

1. MILES, R. (2019). C# Programming. Yellow Book “Cheese” Edition 8.1
2. NAKOV, S. et al (2013). FUNDAMENTALS OF COMPUTER PROGRAMMING
3. WITH C#. Sofia ISBN 978-954-400-773-7
4. RESCA, S. (2019). Hands-On RESTful Web Services with ASP.NET Core 3: Design production-ready, testable, and flexible RESTful APIs for web applications and microservices. ASIN¶ : ˚B07MXLQR34 "
5. BÁRTFAI, B. – BUDAVÁRI, O.: Adatbázis-kezelés. BBS-INFO Kft., 2002. - 138 s. - ISBN 9630034441.
6. KOLOSZÁR, L. – TÓTH, Zs.: Adatbázis-kezelés. Nyugat-magyarországi Egyetem, 2012.
7. https://baranyilaszlozsolt.com/pciskola/Adatbazis_80.o.pdf

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Student workload distribution:
80% - participation in classes, preparation for exercises,
20% - studying literature, practicing the acquired knowledge, working on practical assignments.

Evaluation of subjects
Total number of evaluated students: 0

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

Teacher: Mgr. Dávid Paksi, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University

Name of the faculty: Faculty of Education

Code: KINF/DI1/25	**Name:** Didactics of informatics 1

Types, range and methods of educational activities:
Form of study: Lecture / Practical
Recommended extent of course (in hours):
Per week: 1 / 2 **For the study period:** 13 / 26
Methods of study: present

Number of credits: 5

Recommended semester/trimester of study: 1.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
Students get to know the special elements of elementary school (i.e. for the 1st and 2nd educational cycles) and high school (i.e. for the 3rd educational cycle with overlap into the 2nd cycle) education in IT subjects during the semester, as well as the different educational forms and methods (problem-based, project-based and cooperative learning strategy). They continuously, independently and creatively work on their own teacher- preparation for the given lesson (with given content), study the relevant literature. Prepared teacher-preparations must be submitted and then presented as part of the exercise. Students have the opportunity to coordinate and discuss their sample teacher-preparations with the teacher during the semester. The students' activities (teacher-preparations) and performances (trial teaching) are evaluated during the semester.
Students must obtain at least 50% of the total score to be eligible to take the exam.
The exam is complex, consisting of a practical part - the evaluation of the work during the semester, and of a theoretical part - checking the theoretical knowledge from the topics of the lecture. In order for the students to be able to be evaluated, they must achieve at least 50% in the oral exam. Students are evaluated based on the average obtained from the results of their work during the semester (50%) and the overall evaluation of the oral exam (50%).
Students must achieve an average of at least 90% to obtain an A grade, at least 80% for a B grade, at least 70% for a C grade, at least 60% for a D grade, and at least 50% for an E grade.
Students who do not complete at least 50% of each part will not receive credit for the subject.

Results of education:
Knowledge:
After completing the subject, the student:
• knows the development strategies, methods and forms of the student's digital literacy within the framework of the discipline of their subject specialization;
• knows the structure and phases of the lesson;
• knows the content units of the elementary school (i.e. for the 1st and 2nd educational cycles) and high school (i.e. for the 3rd educational cycle with overlap into the 2nd cycle) informatics subject, their characteristics, directions and goals;
• knows the classification of the thematic units in the given two lines (A – IT thinking, B – digital literacy);
• knows the basic principles of teacher-preparing for the lesson;
• is able and knows apply of acquired knowledge in the field of IT education effectively;

• is aware of the possibilities of the computer as a didactic tool in certain forms and phases of teaching.
Skills:
After completing the subject, the student:
• is able to analyze and solve IT problems;
• has basic practical experience in selecting tasks related to the topic of the given class;
• can make suggestions for preparing for the lesson;
• uses different educational forms and methods;
• can apply his own teacher-preparation in the IT subject;
• knows the technical and legal aspects of teaching process and its organization.
Competencies:
After completing the subject, the student:
• demonstrates a high degree of independence in developing his own teacher-preparation for the given class;
• knows how to work effectively independently;
• characterized by creative thinking and independence;
• applies a creative IT way of thinking in his work;
• is characterized by a good pedagogical approach in the lessons;
• has an overview of the possibilities of IT education in different school types and school levels with the effective use of IT tools;
• has an active and responsible attitude towards the completion of subject tasks.

Brief syllabus:

1. Introduction to the methodology of IT, organizational forms of teaching process.
2. Preparation of informatics teacher for teaching, type and structure of the teaching lesson.
3. Special elements of Informatics in elementary school education (i.e. for the 1st and 2nd educational cycles). The content units of the Informatics subject in elementary schools, their characteristics, directions and goals.
4. Special elements of Informatics in high school education (i.e. for the 3rd educational cycle with overlap into the 2nd cycle). The content units of the Informatics subject in high school education, their characteristics, directions and goals.
5. Assignment of thematic units to line A – IT thinking.
6. Assignment of thematic units to line B – digital literacy.
7. The computer in the teaching-learning process, the computer as a universal didactic aid.
8. Informatization in the educational process, IT in the school and in managerial and organizational activities and its message in the modern society of the 21st century.
9. Internet and communication (cooperative learning), netiquette, data protection and security.
10. Possibilities of e-learning. Internet education and use of digital teaching materials.
11. Supporting creativity in learning - constructivism and constructionism.
12. Teaching methods and strategies. Problem- and project-based learning.
13. Talent and talent management in Informatics.

Literature:

1. ALBERT, S.: Didaktika. 1. vyd. Komárom : Selye János Egyetem, 2008. 274 s. ISBN 978-80-89234-63-9.
2. ALBERT, S.: Általános didaktika. Albert Sándor. Komárno : Selye János Egyetem, 2006. 226 s. ISBN 80-89234-07-0.
3. ALBERT, S.: Didaktika. Dunaszerdahely : Lilium Aurum, 2005. 250 s. ISBN 8080622523.

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8. FALUSI, I.: Didaktika : Elméleti alapok a tanítás tanulásához. 1. vyd. Budapest : Nemzeti Tankönyvkiadó, 2003. 550 s. ISBN 963 19 5296 7.
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10. KALHOUS, Z. – OBST, O. a kol.: Školní didaktika. 2. vyd. Praha : Portál, 2009. 448 s. ISBN 978-80-7367-571-4.
11. KOMENSKÝ, J. A.: Výber myšlienok z diela Veľká didaktika. Prešov : Metodické centrum Prešov, 1992. 23 s. ISBN 8085410273.
12. NÉMETH, G.: Informatika. Budapest : Műegyetemi Kiadó, 2002. 215 s. ISBN 0108228.
13. NIKL, J.: Metody projektování učebních úloh. Gaudeamus, 1997. 71 s. ISBN 8070412305
14. OBDRŽÁLEK, Z.: Didaktika pre študentov učiteľstva základnej školy. 1. vyd. Bratislava : Univerzita Komenského, 2003. 180 s. ISBN 80-223-1772-1.
15. PETLÁK, E.: Všeobecná didaktika. 1. vyd. : IRIS, 2004. 316 s. ISBN 80-89018-64-5.
16. RYBÁR, J.: Kognitívne vedy. Bratislava : Kalligram, 2002. 360 s. ISBN 80-7149-515-8.
17. STOFFA, V.: Az informatika alapjai I. Komárno : Apáczai közalapítvány, 2007. 268 s. ISBN 978-80-89234-29-5.
18. STOFFOVÁ, V. - MASTALERZ, E. – NOGA, H. XXIV DIDMATTECH 2011 : Problems in teachers education . 1. vyd. Krakow : Institute of Technology, 2011. 270 s. ISBN 978-83-7271-679-8.
19. STOFFOVA, V.: Az informatika alapjai II.: A számítógépes hálózatok . 1. vyd. Komárno : UJS, 2010. 140 s. ISBN 978-80-89234-65-3.
20. STOFFOVÁ, V.: Počítač univerzálny didaktický prostriedok. 1. vyd. Nitra : PF UKF, 2004. 173 s. ISBN 80 8050 765 1.
21. SZABÓ, L.T.: Didaktika szöveggyűjtemény. Debrecen : Kossuth Egyetemi Kiadó, 2004. 310 s. ISBN 9634728073.
23. TUREK, I.: Didaktika. 3.prepracované a doplnené vyd. Bratislava : Wolters Kluwer, s.r.o., 2014. 618 s. ISBN 978-80-8168-004-5.
24. Štátny vzdelávací program pre predmet Informatika. [online]. Dostupné: https:// www.statpedu.sk/sk/svp/inovovany-statny-vzdelavaci-program/
25. Upravené ciele a obsah vyučovacieho predmetu Informatika. [online]. Dostupné: https:// www.statpedu.sk/files/sk/svp/pilotne-overovanie/upravene-ciele-obsah/aktualizovane-vs/vo_mai.pdf

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Student workload:
40% - participation in classes, own preparation for exams,
60% - study of literature, work on own teacher-preparation for the given lesson.

Evaluation of subjects
Total number of evaluated students: 24

A	B	C	D	E	FX
62.5	20.83	12.5	0.0	0.0	4.17
Teacher: Dr. habil. Dr. Gábor Kiss, PhD., PaedDr. Krisztina Czakóová, PhD.,					
Date of last update: 19.03.2025					
Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.					

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/DI2/25	**Name:** Didactics of informatics 1

Types, range and methods of educational activities:
Form of study: Lecture / Practical
Recommended extent of course (in hours):
Per week: 1 / 2 **For the study period:** 13 / 26
Methods of study: present

Number of credits: 5

Recommended semester/trimester of study: 2.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
Students get to know the special elements of the teaching of the IT subject in elementary schools (i.e. for the 1st and 2nd educational cycles) and high schools (i.e. for the 3rd educational cycle with overlap into the 2nd cycle) during the semester - with particular attention to programming, as well as different teaching forms and methods (problem-based, project-based and cooperative learning). They continuously familiarize themselves with the possibilities of programming in child-oriented programming languages and programming robot toys, work independently and creatively on their own preparations for the given lesson (with the given content, concentrating on individual phases of programming), and study the relevant literature. They must submit the teacher-preparations and then present them as part of the exercise (trial teaching). Students develop and submit 5 preparations for evaluation during the semester, which they must present. Students have the opportunity to consult the teacher-preparations. The students' activities (development of teacher-preparations) and presentations (presentation of teacher-preparations - trial teaching) are evaluated during the semester. Students must obtain at least 50% of the total score to be eligible to take the exam.
The exam is complex, consisting of a practical part - the evaluation of the work during the semester, and of a theoretical part - checking the theoretical knowledge of the topics of the lecture. In order to recognize the subject, the oral exam must be completed with at least 50%. Students are evaluated based on the average obtained from the cumulative evaluation of the continuous semester work (50%) and the oral exam (50%).
Students must achieve an average of at least 90% to obtain an A grade, at least 80% for a B grade, at least 70% for a C grade, at least 60% for a D grade, and at least 50% for an E grade. Students who do not complete the individual parts with at least 50% will not receive credit for the subject.

Results of education:
Knowledge:
After completing the subject, the student:
• knows the development strategies, methods and forms of students' digital and programming skills within the subject area;
• knows the structure and phases of the lesson;
• knows the content units of the informatics at elementary and high school education, their characteristics, directions and goals;

• knows the classification of the thematic units in the 2 orientations lines (A – IT thinking, B – digital literacy);
• knows the basic principles of analyzing problems from the point of view of digital technologies;
• knows the basic principles of teacher-preparation for the lesson;
• knows and can effectively apply the acquired knowledge to the development of algorithmic thinking and the teaching of programming in elementary and high schools education;
• is aware of the possibilities of the computer as a didactic aid in some forms and phases of teaching programming;
• has knowledge of issues related to teaching informatics, which they will be able to apply also in the 2nd educational cycle.
Skills:
After completing the subject, the student:
• can analyze and solve IT and algorithmic problems;
• has basic practical experience in selecting tasks related to the topic of the given lesson;
• has experience in creating computer programs that support problem solving;
• can make suggestions for the teacher's preparation for the lesson;
• can apply various educational forms and methods, with particular regard to the teaching of programming in elementary and high schools;
• is able to apply his own teacher preparation to teaching programming in elementary and high school Informatics education;
• knows the technical and legal aspects of teaching and its organization;
• is able to connect acquired theoretical knowledge in informatics with practical insights and experience, and subsequently apply them in educational practice, including the 2nd educational cycle.
Competencies:
After completing the subject, the student:
• demonstrates a high degree of independence in developing his own teacher-preparation for the given lesson;
• knows how to work effectively independently;
• is characterized by creative and algorithmic thinking and independence;
• applies a creative IT way of thinking in his work;
• is characterized by a good pedagogical approach in the lessons;
• has an overview of the possibilities of teaching programming in different types and levels of schools, through the effective selection of programming tools;
• has an active and responsible attitude towards the completion of subject tasks.

Brief syllabus:

1. The place of programming in the teaching of Informatics, developing algorithmic thinking of pupils in elementary school, introduction to programming, children's programming languages and microworlds, their application in elementary and high schools (ImagineLogo, Scratch, KoduGameLab, and others), visualization, interactivity and openness of programming environment. Creation of animations.
2. Teaching programming at elementary school. Written and graphical expression of the algorithm. Analysis of the problem. Interactive expression of the algorithm. Robot control - programmable robotic toys and their simulators available online (Bee-bot emulator, Ozobot). Instructions entered sequentially, conditional branching, loops.
3. Gradual improvements of the algorithm (program). Algorithm structure, fundamental errors. Characteristics of parametric tasks. Basic properties of a good algorithm.
4. Computer Aided Learning (CAL), e-learning, tutor, interactive teaching text (curriculum), Internet Teaching System - frameworks (ITS).

5. Model, modeling and simulation - to support learning. Virtual reality and artificial intelligence, and its elements in the educational process.
6. Expert and pedagogical information systems for the benefit of education and its organization.
7. The role of computers in the assessment of knowledge, presentation of the curriculum, didactic computer games and applications.
8. Computer-based knowledge testing, online questionnaires and tests, types of questions and their programmatic evaluation.
9. Teaching programming at high schools. Expressing the algorithm using a higher-level programming language (C, C++, C #, Java, etc.).
10. Robotics - programmable robots at a higher level, blockly program environments (Dash, Edison, Ozobot, and others).
11. Target requirements for matriculation exams. Requirements for knowledge and skills of graduates from the subject Informatics. Caring for talents and gifted people in the subject of informatics within the framework of programming.
12. Information processing tools - computer generations.
13. Environments for solving algorithms - development and classification of programming languages.

Literature:

1. ALBERT, S.: Didaktika. 1. vyd. Komárom : Selye János Egyetem, 2008. 274 s. ISBN 978-80-89234-63-9.
2. CZAKÓOVÁ, K. – HORVÁTH, R. – STOFFOVÁ, V.: Modelovanie, simulácia a animácia v edukácii. Trnava : Pedagogická fakulta Trnavskej univerzity v Trnave, 2023. 107 s. ISBN 978-80-568-0624-1. DOI: https://doi.org/10.31262/978-80-568-0624-1/2023
3. ČAPEK, R.: Moderní didaktika : Lexikon výukových a hodnoticích metod. 1. vyd. Praha : Grada, 2015. 604 s. ISBN 978-80-247-3450-7.
4. CSŐKE, L. - GARAMHEGYI, G.: A számítógép - programozás logikai alapjai. Algoritmusok és elemi adatszerkesztés. Budapest : Nemzeti Tankönyvkiadó, 2002. 144 s. ISBN 9631883310.
5. CZAKÓOVÁ, K. – STOFFOVÁ, V. Kreativitás és az aktív tanulást támogató programkörnyezetek. In: Mikrovilág alkalmazások : Egyetemi tankönyv. 1. kiadás. Komárno : Univerzita J. Selyeho, 2016. s. 12-31. ISBN 978-80-8122-191-0.
6. CZAKÓOVÁ, K. Saját alkalmazás fejlesztése Imagine programkörnyezetben. In: Mikrovilág alkalmazások : Egyetemi tankönyv. 1. kiadás. Komárno : Univerzita J. Selyeho, 2016. s. 35-107. ISBN 978-80-8122-191-0.
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9. KALHOUS, Z. – OBST, O. a kol.: Školní didaktika. 2. vyd. Praha : Portál, 2009. 448 s. ISBN 978-80-7367-571-4.
10. OBDRŽÁLEK, Z.: Didaktika pre študentov učiteľstva základnej školy. 1. vyd. Bratislava : Univerzita Komenského, 2003. 180 s. ISBN 80-223-1772-1.
11. PENTELÉNYI, P.: Az algoritmikus szemléletmód kialakítása és fejlesztése a tanítási - tanulási folyamatban. Budapest : Ligatura, 1999. 128 s. ISBN 963 85138 8 8.
12. STOFFA, V.: Algoritmizáció és programozás I. Komárno : Selye János Egyetem, 2005. 174 s. ISBN 80-969251-7-2.
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14. STOFFOVÁ, V. – CZAKÓOVÁ, K.: Tvorba vlastných aplikácií v Imagine. In: Úvod do programovania v prostredí mikrosvetov : Vysokoškolská učebnica. Komárno : Univerzita J. Selyeho, 2016. 115 s. ISBN 978-80-8122-170-5.
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18. Upravené ciele a obsah vyučovacieho predmetu Informatika. [online]. Dostupné: https://www.statpedu.sk/files/sk/svp/pilotne-overovanie/upravene-ciele-obsah/aktualizovane-vs/vo_mai.pdf

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Student workload:
40% - participation in classes, preparation for exam,
60% - study of literature, work on own teacher-preparations for the given lesson.

Evaluation of subjects
Total number of evaluated students: 24

A	B	C	D	E	FX
75.0	8.33	12.5	4.17	0.0	0.0

Teacher: Dr. habil. Dr. Gábor Kiss, PhD., PaedDr. Krisztina Czakóová, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/DS/25	**Name:** Diploma seminar
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 4	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: During the semester, the student is responsible for formulating their specific research questions (if relevant), conducting market research on the given topic, and writing the outline of the master's thesis, for which 20 points can be earned. An additional 10 points can be earned for searching available literature and identifying the 15 most relevant sources for the "References" section of the thesis. By the end of the course, the first draft of the thesis must be written, and a project (program, didactic application, educational software, website, etc.) must be completed to 70%, if it is part of the thesis, for which 70 points can be awarded. To obtain a grade of A, at least 90 points are required; for a B, at least 80 points; for a C, at least 70 points; for a D, at least 60 points; and for an E, at least 50 points.	
Results of education: Knowledge: After completing the course, the student: • can describe the individual parts of a master's thesis; • knows data collection tools and can explain their objectives; • is familiar with the most important methods for processing the outcomes of scientific work; • is aware of scientific ethics in academic writing; • understands the principles of preparing and implementing their own project; • knows tools for project development and research. Skills: After completing the course, the student: • is capable of independently planning and conducting research; • is able to present the results of their own research activities to a professional audience; • can work with scholarly literature; • can formulate research questions; • can write an abstract, thesis outline, and cite correctly; • can conduct their own research and analyze data; • knows how to prepare and successfully defend a master's thesis. Competencies: After completing the course, the student: • can write a master's thesis on a selected topic; • applies a critical approach;	

• follows copyright regulations, scientific ethics, and the relevant ISO and STN standards in research.

Brief syllabus:

The main aim of the course is to help students in writing their thesis. The topic and title of the thesis is decided at the beginning of the third semester. During the semester, the thesis advisor provides general literary sources for writing the thesis as well as for the topic chosen by the student. The student must read thoroughly in order to augment the sources with a variety of additional sources gathered from the library and the Internet. Based on the materials and research proposal, the student will provide the main structure of the thesis by the end of the examination period, write and produce approximately 70% of the thesis (includes: Contents, Introduction, Theoretical part divided into chapters and subchapters, Bibliography list, own project on the topic - practical part of the thesis).
1. Exploration of the thesis topic and identification of the research problem. Research methods and methodology. Writing up the findings.
2. Preparation of own project. Determination of the objectives of the thesis.
3. Preparation of the project work plan. Organisation and implementation of the work. Preparation and implementation of independent research activities in practice. Implementation of sub-tasks.
4. What should the thesis contain? (Front page, Abstract, Table of Contents, Foreword, Introduction/ Problem, Literature Review, Method, Design, Sample, Data Collection, Data Analysis, Custom Project, Implementation and Results, Discussion, Conclusion, Resume, Bibliography, Appendices).
5. Writing the abstract.
6. Planning, writing the thesis outline (setting the objective, specifying the problem, market research on the topic, literature search, preparing the skeleton, constructing the research proposal, conducting the research and writing the thesis, timetable).
7. Presentation of research background / literature review / software development environment for creating own project.
8. Research methods. Qualitative, quantitative and mixed methods research, quality criteria, data collection, data analysis, reporting research findings. Processing of experimental results.
9. Research ethics, plagiarism.
10. Use of graphs, tables and diagrams.
11. Processing, interpreting and presenting the results of independent scientific work.
12. Citation styles (use of in-text references to reference lists, creating a reference list).
13. Presentation of a research proposal. Preparing, presenting and defending a thesis. The course of the defence and the opinion on the referee's report.

Literature:

1. ISO STN 690: Dokumentácia - Bibliografické odkazy – Obsah, forma a štruktúra. 1998.
2. KATUŠČÁK, D.: Ako písať záverečné a kvalifikačné práce. Nitra : Enigma, 2008, s. 164. ISBN 978 80 89132 45 4.
3. KIMLIČKA, Š.: Ako citovať a vytvárať zoznamy bibliografických odkazov : podľa noriem ISO 690 pre „klasické“ aj elektronické zdroje. Bratislava : Stimul, 2002, s. 82. ISBN 80-889-82-57-X.
4. Smernica rektora o úprave, registrácii, sprístupnení a archivácii záverečných prác na Univerzite J. Selyeho – dostupné na https://www.ujs.sk/documents/%C3%9A.Z.Smernica2-2021vrat.dodatkov1-2.pdf

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:

Student workload distribution:

10% – attendance at instructional sessions,
50% – study of academic literature, preparation of the master's thesis proposal,
40% – project preparation (software, website, etc.).

Evaluation of subjects
Total number of evaluated students: 2

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

Teacher: PaedDr. Ladislav Végh, PhD., Dr. habil. Dr. Gábor Kiss, PhD., PaedDr. Krisztina Czakóová, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/INm/ MOB1-IN/25	**Name:** Student mobility related to graduate profile - Teaching of informatics
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 1., 2..	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Total student workload: 3 credits = 75–90 hours 26 hours participation in contact hours; 20 hours preparation of the educational activity project and assignments given during lessons; 35–45 hours self-study and preparation of a brief reflection or report on the acquired experiences and knowledge in relation to the graduate's profile. The course is completed in the form of "passed" (without a grade), based on the fulfilment of the above conditions. The course completion is recorded in AIS by the academic responsible person (ZOŠP) after verifying that the conditions have been met.	
Results of education: Knowledge: - The student acquires an overview of subject-specific topics that broaden or complement their graduate profile in an international and intercultural context. - They acquire knowledge gained during mobility that is not directly part of their study plan but is relevant to their field of expertise. - They understand how professional knowledge is applied in various academic or work environments abroad. Skills: - The student is able to apply the knowledge acquired during mobility in further studies or professional practice. - They can communicate and collaborate in an international team, in a foreign language, and in a culturally diverse environment. - They are capable of reflecting on their own educational needs and adapting to new academic or professional settings. Competences: - The student develops competences necessary for lifelong learning, flexibility, and adaptability. - They strengthen their ability to actively participate in international educational activities and projects.	

- They increase their level of independence, responsibility, and initiative in solving tasks outside their domestic academic environment.

Brief syllabus:
- Introduction to the subject, the importance of academic mobility and the internationalisation of higher education.
- Professional seminars by a foreign university teacher in line with the graduate profile. International approaches and current trends in the field. Intercultural communication and working in an international academic environment.
- Reflection of the student on the knowledge, skills and experience gained from the teaching conducted by a foreign university teacher.
- Discussion and feedback - relevance of the knowledge gained for further study and professional development.

Literature:
Literature as recommended by the university teacher involved in the mobility programme.

Language, knowledge of which is necessary to complete a course:
English, Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 0

a	n
0.0	0.0

Teacher:

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/INm/ MOB2-IN/25	**Name:** Experience equivalent to academic mobility - Teaching of informatics
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 1., 2..	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Total student workload: 3 credits = 75–90 hours 26 hours participation in contact hours; 20 hours preparation of the educational activity project and assignments given during lessons; 35–45 hours self-study and preparation of a brief reflection or report on the acquired experiences and knowledge in relation to the graduate's profile. The course is completed in the form of "passed" (without a grade), based on the fulfilment of the above conditions. The course completion is recorded in AIS by the academic responsible person (ZOŠP) after verifying that the conditions have been met.	
Results of education: Knowledge: - The student acquires subject-specific knowledge in line with the graduate profile, delivered by a foreign academic staff member in an international context. - The student becomes familiar with various approaches, concepts, and methods used in foreign academic and research environments. - The student gains an overview of current trends and findings in the relevant field from an international perspective. Skills: - The student is able to communicate and work in a foreign language, developing their language and intercultural communication skills. - The student can actively apply the acquired knowledge in their own academic and professional context. - The student develops the ability to critically analyse and apply new insights from the international academic environment. - The student enhances the ability to integrate new knowledge from international research into their own research or practice. Competences: - The student strengthens their ability to navigate the international academic environment and actively participate in it.	

- The student improves their adaptability, independence, and flexibility when studying in an intercultural environment.
- The student develops openness to diverse professional and cultural approaches, as well as the ability to work both independently and as part of a team.

Brief syllabus:
- Introduction to the subject, the importance of academic mobility and the internationalisation of higher education.
- Professional seminars by a foreign university teacher in line with the graduate profile. International approaches and current trends in the field. Intercultural communication and working in an international academic environment.
- Reflection of the student on the knowledge, skills and experience gained from the teaching conducted by a foreign university teacher.
- Discussion and feedback - relevance of the knowledge gained for further study and professional development.

Literature:
Literature as recommended by the university teacher involved in the mobility programme.

Language, knowledge of which is necessary to complete a course:
English, Hungarian or Slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 0

a	n
0.0	0.0

Teacher:

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ MIT/25	**Name:** Materials in ICT
Types, range and methods of educational activities: **Form of study:** Lecture / Seminar **Recommended extent of course (in hours):** **Per week:** 1 / 1 **For the study period:** 13 / 13 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Students are required to actively participate in class. Students write a test from the subject in the last week of the semester. To obtain grade „A“ students have to obtain minimum 90% of the total score, to obtain grade „B“ students have to obtain 80% of the total score, to obtain grade „C“ students have to obtain 70% of the total score, to obtain grade „D“ students have to obtain 60% of the total score, to obtain grade „E“ students have to obtain 50% of the total score. There is no credit for the subject if a student obtains less than 50%.	
Results of education: Knowledge: After completing the course, the student possesses knowledge of materials used in ICT, their properties, and parameters from the user’s perspective. Skills: After completing the course, the student is able to identify and use materials applied in ICT, apply their properties and parameters from the user’s point of view, as well as utilize modern technologies (nanotechnologies, laser technologies, plasma technologies, space technologies). Competencies: After completing the course, the student demonstrates independence in working on topics related to the subject area, as well as the ability to recognize materials used in ICT, their properties and parameters. The student possesses knowledge of modern technologies.	
Brief syllabus: 1. The importance of materials in the development of civilization; ICT materials in historical perspective 2. Electromaterials (conductive materials, semiconductors, electrical insulators, dielectrics) 3. Electrotechnical materials (magnetic materials and special ICT materials – memory, recording, sensing, and signal materials) 4. Electrotechnical materials (liquid crystals, superconductors, electrically conductive polymers, fullerenes) 5. Electrotechnical materials (reprographic materials, photoconductive materials, acoustic materials, optical materials, construction materials) 6. Laser technology and plasma technology	

7. Microtechnologies and nanotechnologies
8. Space technology
9. Physical background of processes used in ICT materials
10. Main properties of individual materials and their user-related parameters
11. Special aspects of ICT materials (safety, health, ecology, economy, energy, terminology, history, forecasting, etc.)
12. Development trends

Literature:

1. RAAB, M.: Materiály a člověk : (Netradiční úvod do současné materiálové vědy). 1. vyd. Praha : Encyklopedický dům, 1999. ISBN 80-86044-13-0
2. KUČEROVÁ, E.: Elektrotechnické materiály. 2. vyd. Plzeň : Západočeská univerzita, 2004.
3. ŠAVEL, J.: Materiály a technológie v elektronice a elektrotechnice. 1. vyd. Praha : BEN, 1999. ISBN 80-86056-75-9
4. PTÁČEK, L. et al.: Nauka o materiálu II. Brno : Cerm, 1999. ISBN 80-7204-130-4
5. SEMÁK, D. – BIRČÁK, J.: Chalkogénne polovodiče na záznam informácie. Prešov : FHPV PU, 1998. ISBN 80-88885-37-X
6. ANDERSON, J. C. et al.: Materials Science. London : Chapman and Hall, 1992.
7. MATH, I.: Tomorrow´s Technology. NewYork, Charles Scribner´s Sons, 1992. ISBN 0-684-19294-2
8. ROUS, B.: Materiály pro elektroniku a mikroelektroniku. 1. vyd. Praha : SNTL, 1991. ISBN 80-03- 00617-1
9. ASHBY, M. F. – JONES, D. R. H.: Engineering Materials : An Introduction to their Propertires and Applications. I - 1980. II – 1986.
10. BARABASZOVÁ, K.: Nanotechnologie a nanomateriály. 1. vyd. Ostrava : VŠB – TU, 2006. 158 s. ISBN 80-248-1210-X

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Student workload:
60% - participation in classes, preparation for lectures and exercises,
40% - study of literature, practice of acquired knowledge, preparation for test.

Evaluation of subjects
Total number of evaluated students: 15

A	B	C	D	E	FX
20.0	26.67	26.67	20.0	6.67	0.0

Teacher: Ing. Ondrej Takáč, PhD., Mgr. Dávid Paksi, PhD.,

Date of last update: 24.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ MS1/25	**Name:** Introduction to the modeling and simulation
Types, range and methods of educational activities: **Form of study:** Lecture / Practical **Recommended extent of course (in hours):** **Per week:** 2 / 1 **For the study period:** 26 / 13 **Methods of study:** present	
Number of credits: 4	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The course ends with a combined exam. The student can obtain a total of 100 points, of which 60 points are obtained in the written examination and 40 points for the individual project. A minimum of 90 points is required for grade A, 80 points for grade B, 70 points for grade C, 60 points for grade D and 50 points for grade E. Student who achieves less than 50 points will fail the course.	
Results of education: Knowledge: After completing the course, the student will have a general knowledge of different types of basic models in computer science, such as continuous systems, discrete systems, Markov chains, crowd-serving systems. Skills: After completing the course, the student will be able to independently apply the models mentioned above. Competences: After completing the course, the student will show autonomy in creating IT models for different application areas.	
Brief syllabus: 1. Introduction to systems modelling and simulation, basic concepts, classification of systems and their basic characteristics; 2. Continuous systems: description of continuous systems, mathematical models of continuous systems and their development, Simulation tools for continuous systems (Simulink), computer simulation of continuous systems; 3. Discrete systems: description of discrete systems, mathematical models of discrete systems and their creation, simulation tools for discrete systems (Simulink), computer simulation of discrete systems; 4. Random number generation methods, Monte Carlo method and its applications; 5. Markov random discrete and continuous processes and their properties, applications and simulations, 6. Poisson process; 7. SHOs and their classification, analytical solution of Kolmogorov differential equations, description and analytical solution of different types of SHOs, computer simulation (Simevents)	
Literature:	

1. GIORDANO, F.R.: A First Course in Mathematical Modelling, Thomson, 2004.
2. KMEŤ, T.: Mathematical Modelling and Simulation of Biological Systems, AM Nitra, 2005.
3. NEUSCHL, Š. a kol.: Modelovanie a simulácia. Alfa - SNTL. Praha 1988.
4. Simulink Simulation and Model-Based Design, The MathWorks Inc., 2004.
5. DABNEY, J. B.: Mastering Simulink, Prentice Hall, 2004
6. BRUNOVSKÝ, P. Stochastické modely operačnej analýzy, učebný text FMFI UK, 2005
7. TAKÁČ, O.: Modellezés és szimuláció. 1. vyd. Komárno: UJS, 2017, 234 s. ISBN 978-80-8122-203-0.
8. BRAUER, F., CHAVEZ, C., C.: Mathematical Models in Population Biology and Epidemiology. 2012
9. GEDA, G.: Modellezés és szimuláció az oktatásban. Educatio kht. 2011.

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Distribution of students' workload:
40% - participation in tutorials, preparation for exams,
60% - studying literature, practising acquired knowledge, working on own projects.

Evaluation of subjects
Total number of evaluated students: 23

A	B	C	D	E	FX
39.13	13.04	21.74	21.74	4.35	0.0

Teacher: prof. RNDr. Tibor Kmeť, CSc., PaedDr. Ladislav Végh, PhD., Mgr. Dávid Paksi, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/MT/25	**Name:** Modern technologies in education

Types, range and methods of educational activities:
Form of study: Lecture / Practical
Recommended extent of course (in hours):
Per week: 1 / 2 **For the study period:** 13 / 26
Methods of study: present

Number of credits: 5

Recommended semester/trimester of study: 3.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
Students learn about mobile technologies in teaching of Informatics at elementary and high school subjects during the semester, as well as child-oriented programming languages (microworlds), the possibilities and applications of programmable educational (toy) robots. They actively use online learning environments and platforms, interfaces for sharing learning materials (interfaces for conference calls), and constantly study the relevant literature. They continuously and creatively work on their own projects for the given lesson (with given content), which they hand in and then present as part of the exercise. Students are evaluated based on their activities (own projects) and performances (presentation of projects) during the semester. Students must develop and submit 5 projects for evaluation, which they must also present during the semester. Students have the opportunity to consult with the teacher about their projects - samples of their preparation. The students' activities (development of projects) and their performances (presentation of their teacher-preparation for the project - trial teaching) are evaluated during the semester, from which they must obtain at least 50% of the total score in order to pass the exam. The exam is complex, consisting of a practical part - the assessment of continuous teacher-preparation for projects during the semester, and a theoretical part - checking theoretical knowledge related to modern technologies and their application in education (questions from the topics of the lectures). For the assessment, students must also pass the oral exam with at least 50%. Students receive the final classification based on the average of their practical results (50%) and the results of the theoretical part of the oral exam (50%) during the semester.
They must achieve an average of at least 90% to obtain an A rating, at least 80% for a B rating, at least 70% for a C rating, at least 60% for a D rating, and at least 50% for an E rating. Students who do not complete at least 50% of the each parts will not receive credit for the subject.

Results of education:
Knowledge:
After completing the subject, the student:
• knows the strategies, methods and forms necessary for the development of the student's digital and programming skills within the subject area;
• knows the structure and phases of the lesson;
• knows the educational technical and methodological requirements of modern technologies;
• knows the basic principles of analyzing problems from the point of view of digital and mobile technologies;

• knows the basic principles of preparing for the lesson;
• is aware of the application possibilities of modern (mobile) technologies in certain forms and phases of teaching.
Skills:
After completing the subject, the student:
• can analyze and solve IT and algorithmic problems using mobile technologies and devices;
• has basic practical experience in selecting tasks related to the topic of the given lesson;
• can make suggestions for teacher-preparing for the lesson;
• can apply different educational forms and methods, focusing on teaching programming in elementary and high schools, using mobile technologies;
• can work with various modern technologies;
• can apply his own teacher-preparation in elementary and high school Informatics lessons;
• is able to use modern mobile technologies in the teaching of the Informatics;
• knows and applies the technical and legal aspects of teaching and its organization.
Competencies:
After completing the subject, the student:
• demonstrates a high degree of independence in project creation and independent teacher-preparation for the given lesson;
• knows how to work effectively independently;
• is characterized by creative and algorithmic thinking and independence;
• applies a creative IT way of thinking in his work;
• is characterized by a good pedagogical approach in the lessons;
• has an overview of the possibilities of teaching Informatics in different school types and levels, through the effective supply of mobile and online didactic tools;
• has an active and responsible attitude towards the completion of subject tasks.

Brief syllabus:
1. Areas of use of modern technologies in subject of Informatics.
2. Tablets in Informatics lesson (as a universal teaching tool). Creating 3D images (MakeIt3D).
3. Geolocation games (Geocaching, Wherigo, drawing with GPS).
4. Educational programming - programming of mobile applications.
5. Programming environments for creating mobile applications - MIT App Inventor, Urwigo. Mobile applications for teaching programming and developing algorithmic thinking (Run Marco, Lightbot, Tnyker, Bit by Bit, Scratch Jr., The Foos, Fic the Factory, Pocket Code).
6. Educational robotics and its application in programming. Online simulators for controlling robots (Bee-bot emulator, Ozobot).
7. Robotics in elementary school - programming of robots Bee-bot, Dash, Ozobot.
8. Robotics in high school - Lego Mindstorms EV3, Edison, Ozobot.
9. Possibilities of child-oriented programming languages and microworlds (Imagine Logo).
10. Icon-based programming - Scratch, KoduGameLab, Baltík.
11. Creating quizzes or tests, automatically processing and publishing the answers (Socrative, Hot Potatoes, Khoot, Menti).
12. E-books, e-learning and electronic course materials, online learning environments and platforms, online interfaces for sharing course materials (conference call platforms) - Zoom, Google Meet, Google Classroom, Google Drive.
13. The latest generation of microcomputers and their possibilities in education (Raspberry Pi models, hardware components, OS capabilities, software capabilities, reactive programming and implementation of smart projects).

Literature:

1. CZAKÓOVÁ, K. – HORVÁTH, R. – STOFFOVÁ, V.: Modelovanie, simulácia a animácia v edukácii. Trnava : Pedagogická fakulta Trnavskej univerzity v Trnave, 2023. 107 s. ISBN 978-80-568-0624-1. DOI: https://doi.org/10.31262/978-80-568-0624-1/2023
2. CZAKÓOVÁ, K. - STOFFOVÁ, V. Kreativitást és az aktív tanulást támogató programkörnyezetek. In: Mikrovilág alkalmazások : Egyetemi tankönyv. 1. kiadás. Komárno :Univerzita J. Selyeho, 2016. s. 12-31. ISBN 978-80-8122-191-0.
3. CZAKÓOVÁ, K. Saját alkalmazás fejlesztése Imagine programkörnyezetben. In: Mikrovilág alkalmazások : Egyetemi tankönyv. 1. kiadás. Komárno : Univerzita J. Selyeho, 2016. s. 35-107. ISBN 978-80-8122-191-0.
4. EARLE Castledine, E. - EFTOS, M. - WHEELER, M.: Vytváříme mobilní web a aplikace : pro chytré telefony a tablety. 1. vyd. Brno : Computer Press, 2013. 288 s. ISBN 978-80-251-3763-5.
5. ILLÉS, Z. a kol.: Mobil világ és fejlesztése WP7 környezetben. [Online]. Dostupná na internete:<http://dtk.tankonyvtar.hu/xmlui/handle/123456789/3825>
6. KALAŠ, I.: Premeny školy v digitálnom veku. 1. vyd. Bratislava : Slovenské pedagogické nakladateľstvo - Mladé letá, s.r.o., 2013. 256 s. ISBN 978-80-10-02409-4.
7. LOVÁSZOVÁ, G. a kol.: Mobilné technológie vo vyučovaní informatiky. 1. vyd. Nitra : UKF, Fakulta prírodných vied, 2016. 90 s. ISBN 978-80-558-1104-8.
8. MACHAJ, J.: Kniha trendov vo vzdelávaní 2013/2014 : Vzdelanie v digitálnom svete. Ako držať krok s dobou? 1. vyd. Bratislava : EDULAB, n.o., 2014. 82 s.
9. McMANUS, S.: Scratch Programming : Covers Scratch 2.0 and Scratch 1.4. 1. vyd. Leamington : In Easy Steps Limited, 2013. 216 s. ISBN 978-1-84078-612-5.
10. MOLNÁR, P.: Hálózatosodás és tanulás hálózati környezetben. [Online]. Budapest : ELTE, 2013. 82 s. ISBN 978-963-284-325-4. Dostupná na internete: <http://dtk.tankonyvtar.hu/xmlui/handle/123456789/12007>
11. PENTELÉNYI, P.: Az algoritmikus szemléletmód kialakítása és fejlesztése a tanítási - tanulási folyamatban. Budapest : Ligatura, 1999. 128 s. ISBN 963 85138 8 8.
12. STOFFOVÁ, V. - CZAKÓOVÁ, K.: Úvod do programovania v prostredí mikrosvetov : Vysokoškolská učebnica. Komárno : Univerzita J. Selyeho, 2016. 115 s. ISBN 978-80-8122-170-5.
13. VALK, L.: The Lego Mindstroms EV3 Discovery Book : A beginner's guide to building and programming robots. 1. vyd. San Francisco : No Starch Press, 2014. 371 s. ISBN 978-1-59327-532-7.
14. Upravené ciele a obsah vyučovacieho predmetu Informatika. [online]. Dostupné: https://www.statpedu.sk/files/sk/svp/pilotne-overovanie/upravene-ciele-obsah/aktualizovane-vs/vo_mai.pdf
Odborné články v téme a záverečné práce študentov UJS:
CSÓKA, M.: Raspberry Pi alkalmazása az informatikaoktatásban. DOI 10.36007/3778.2020.213. In: 12th International Conference of J. Selye University : Sections of Pedagogy and Informatics : Sections of Pedagogy and Informatics / Szőköl István, Horváth Kinga, Tóth Péter, Gubo Štefan. 1. vyd. Komárno : Univerzita J. Selyeho, 2020. ISBN 978-80-8122-377-8, online, s. 213-221.
CSÓKA, M.: Raspberry Pi alkalmazása az informatika oktatásban. [Rigorózna práca . Komárno : Univerzita J. Selyeho, 2019. - 113 s.
CSÓKA, M. – CZAKÓOVÁ, K.: Innovations in education through the application of raspberry pi devices and modern teaching strategies. In. INTED 2021 : Proceedings of the 15th International Technology, Education and Development Conference. DOI: 10.21125/inted.2021.1327, p. 6653-6658, Valencia : IATED Academy, 2021. ISBN 978-84-09-27666-0. ISSN 2340-1079.
CZAKÓOVÁ, K. – UDVAROS, J.: Deep Learning In Informatics By Applying Activities Of The Dash Robot. In. ICERI2021 Proceedings : 14th International Conference of Education, Research

and Innovation. DOI: 10.21125/iceri.2021.0649, p. 2573-2577, Valencia : IATED Academy, 2021. ISBN 978-84-09-34549-6. ISSN 2340-1095.
CZÉKUS, B.: Dash programozható robotjáték az alapiskolai informatika oktatásban. [Dipl. pr., Dash]. Komárno: J. Selye University, 2021. 73 s
GAJDOŠ, P.: Programozható robotjátékok a középiskolai informatika oktatásban. [Dipl. pr., robot Edison]. Komárno : Univerzita J. Selyeho, 2019. 58 s.
MURÁR, J.: Programozás bevezetése az alapiskolán Kodu Game Lab programozási környezetben. [Dipl. pr.]. Komárno : Univerzita J. Selyeho, 2018. . 56 s.

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Student workload distribution:
40% - attendance at tutorials, exam preparation,
60% - studying literature, practicing acquired knowledge, preparing term papers.

Evaluation of subjects
Total number of evaluated students: 17

A	B	C	D	E	FX
47.06	23.53	29.41	0.0	0.0	0.0

Teacher: PaedDr. Ladislav Végh, PhD., PaedDr. Krisztina Czakóová, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ NSU/25	**Name:** Neural networks
Types, range and methods of educational activities: **Form of study:** Lecture / Practical **Recommended extent of course (in hours):** **Per week:** 2 / 1 **For the study period:** 26 / 13 **Methods of study:** present	
Number of credits: 4	
Recommended semester/trimester of study: 2.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: During the semester, students create their own application - a computer simulation model of a given system. They will also solve system identification problems analytically, create mathematical models and carry out computer implementation of the models. Students will be graded on the basis of the average of the semester's continuous preparation, the project and the overall grade point average obtained in the exam. A grade of at least 90% is required for grade A, at least 80% for grade B, at least 70% for grade C, at least 60% for grade D, and at least 50% for grade E.	
Results of education: Knowledge: After completing the course, the student will be familiar with different types of neural network models such as feed-forward neural networks, recurrent neural networks, Hopfield neural networks, RBF networks, self-organizing maps. Skills: After completing the course, students will be able to analyse and solve complex problems using neural networks, such as processing numerical data, text, images and sound. Competences: After completing the course, the student will show a high degree of autonomy in creating models. The student will develop a high level of skills in modelling neural networks in different application domains.	
Brief syllabus: 1. Defining and building neural networks. 2. Elements and topology of neural networks. 3. History and applications of neural networks. 4. Binary perceptron - learning rule of perceptron, pattern classification. 5. Backpropagation 1 - multilayer feedforward networks, derivation of learning rules. 6. Backpropagation 2 - teaching and testing sample set, relearning, modifications to the default learning rule. 7. The approximation capabilities of neural networks. 8. Linear neural networks. 9. Radial basis function (RBF) networks. 10. Hopfield discrete and continuous networks.	

11. Recurrent neural networks - temporal structure in data, feed forward neural time delay (TDNN), echo - echo state neural networks.
12. Learning and application of recurrent neural networks.
13. Self-organising maps, Kohonen model, LVQ, Max-net, Oja and Sanger learning rule, extract principal components from data, data dimension reduction, clustering.

Literature:

1. KVASNIČKA, V. - BEŇUŠKOVÁ, L. - POSPÍCHAL, J. - FARKAŠ, I. - TIŇO, P. – KRÁĽ, A.: Úvod do teórie neurónových sietí . IRIS, Bratislava, 1997.
2. SIVANANDAM, S. N. - SUMATHi, S. – DEEPA, S.N. : Introduction to Neural Networks Using Matlab 6.0. Tata McGraw-Hill New Delhi 2006
3. HAYKIN, S.: Neural Networks: A Comprehensive Foundation (2nd ed.). Prentice Hall, NJ 1999.
4. TAYLOR, J. G.: Neural networks and their applications. New York : Wiley, 1996, 302 s. ISBN 0471962821.
5. KMEŤ, T. - KMEŤOVÁ, M. - ANNUŠ, N.: Neurális hálózatok programi megvalósítása MATLAB-ban, UJS, 2021, 225 s. ISBN 9788081224041
6. FAZEKAS, I.: Neurális Hálózatok, Debreceni Egyetem, 2013, 201 s. Forrás: https://gyires.inf.unideb.hu/GyBITT/19/Neuralis_halozatok_v8.pdf
7. ALTRICHTER, M. - HORVÁTH, G. - PATAKI, B. - STRAUSZ, Gy. - TAKÁCS, G. - VALYON, J.: Neurális hálózatok, Panem Könyvkiadó, 2006, 413 s. Forrás: https://docplayer.hu/10994735-Neuralis-halozatok-altrichter-marta-horvath-gabor-pataki-bela-strausz-gyorgy-takacs-gabor-valyon-jozsef.html

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Distribution of students' workload:
50% - participation in tutorials, preparation for exams,
50% - study of literature, practice of acquired knowledge, development of practical exercises.

Evaluation of subjects
Total number of evaluated students: 24

A	B	C	D	E	FX
29.17	16.67	16.67	29.17	8.33	0.0

Teacher: prof. RNDr. Tibor Kmeť, CSc.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ OBm/25	**Name:** Master's thesis and its defence
Types, range and methods of educational activities: **Form of study:** **Recommended extent of course (in hours):** **Per week: For the study period:** **Methods of study:** present	
Number of credits: 8	
Recommended semester/trimester of study: 3., 4..	
Level of study: II.	
Prerequisites: KINF/DS/25	
Conditions for passing the subject: In preparing the final thesis, the student follows the instructions of his/her supervisor and the Rector's Directive regarding editing, registration, access and archiving of theses at J. Selye University. The recommended length of the master's thesis is 50 to 70 pages (90 000 to 126 000 characters including spaces). The deadline for the academic year is set in the academic calendar of the academic year. The originality of the thesis is evaluated in the central thesis register. The result of the originality check, a report on the originality of the thesis assessed. The originality check is a prerequisite for the defence. The submission of the thesis includes the conclusion of a licence agreement for the use of the digital reproduction of the thesis between the author and the Slovak Republic represented by the university. The final thesis shall be assessed by the thesis supervisor and a opponent, who shall draw up opinions according based on the established criteria. The thesis supervisor assesses in particular the fulfilment of the aim of the thesis, the degree of independence and initiative of the student in the elaboration of the topic, cooperation with the thesis supervisor, logical structure of the thesis, the adequacy of the methods used, the methodology, the professional level of the thesis, the depth and quality of processing of the topic, the contribution of the work, the possibility of using the results, the work with literature, the relevance of the sources used in relation to the topic and the aim of the thesis, the formal aspect of the thesis, spelling, stylistics and originality. The opponent assesses in particular the topicality and appropriateness of the topic of the thesis, the statement of the thesis and the content, the logical structure of the thesis, the continuity of the chapters, their proportionality, the appropriateness and suitability of the methods used, the methodology, the professional level of the thesis, the depth and quality of the treatment of the topic, the contribution of the thesis, the work with professional literature, the formal aspect, the spelling, the stylistics and originality. The State Examination Board will assess the originality of the thesis, the contribution of the student's work to the solution of the research problem, the student's independence, his/her ability to solve the research problem - from the search of literature sources, the determination of objectives, the choice of research methodology, the choice of the source of materials, through the implementation of the research, his ability to evaluate the results, discuss the results, summarize the results, present their significance for the educational process, etc. The ability to present the results is also evaluated, including answering questions related to the research process and the topic of the thesis, compliance with time limits, etc. The State Examination Board in a closed	

session will evaluate the course of the defence and decide on the award of the classification.
In the classification, it comprehensively assesses the quality of the final thesis and its defence, taking into account the assessments and the course of the defence, and shall give the defence a single overall mark.
The final grade may be the same as in the evaluations, but it may also be better or worse, in depending on the conduct of the defence.
Final grade: A - 100 - 91%, B - 90 - 81%, C - 80 - 71%, D - 70 - 61%, E - 60 - 50%.
Credit will not be awarded to a student who fails to achieve 50%.
The decision on the result of the defence will be announced publicly by the chairman of the committee together with the result of the theoretical the theoretical part of the oral part of the state examination.

Results of education:
Knowledge:
- the student knows the structure of a scientific publication,
- the student can independently and creatively use professional sources,
- the student is able to analyse and evaluate the current state of the problem in his/her field,
- the student can synthesize and apply the acquired theoretical knowledge in practical educational activities,
- the student can adequately select research procedures and apply them functionally.
Skills:
- by processing the diploma thesis the student should demonstrate the ability to independently acquire theoretical and practical knowledge and creatively apply and use them in solving specific problems,
- the student is able to present and defend his/her professional position on the problems of educational work and find ways to their solution,
- the student has developed the skills of independent learning, which enables him/her to continue further study,
- the student can understand the complexity of phenomena and formulate decisions even when incomplete or limited information, embracing social and ethical responsibility in the application of their knowledge and in making decisions,
- the student will be able to justify the ideas presented, as well as to articulate in a sophisticated manner practical conclusions and recommendations,
- the student will be able to prepare a presentation of the results of his/her own research activities,
- the student will be able to apply the principles of scientific integrity and ethics.
Competences:
- the student can demonstrate his/her linguistic and professional culture and his/her own attitude towards professional problems.
- the student will be able to demonstrate his/her professional and scientific knowledge and skills in his/her field of study,
- the student is able to argue and methodically apply knowledge in theoretical, didactic and methodological contexts,
- the student is able to implement and synthesize the acquired knowledge in practice,
- the student is able to creatively apply knowledge in solving the assigned tasks, analyse the problem and synthesize a new solution,
- the student is able to answer the questions of the supervisor and the opponent at the required level, to successfully defend the final thesis.

Brief syllabus:
The thesis defense has a course of:

1. The student’s presentation of the thesis.
2. Presentation of the main points from the written opinions of the thesis supervisor and the opponent.
3. Student's answers to the thesis supervisor's and opponent's questions.
4. A professional discussion of the thesis with questions for the student.
The student's presentation of the thesis should include, in particular, the following points:
1. A brief justification of the choice of the topic, its topicality, practical contribution.
2. Clarification of the objectives and methods used in the elaboration of the thesis.
3. The main content problems of the thesis.
4. Conclusions and practical recommendations reached by the author of the thesis.
During the presentation, the student has at his/her disposal his/her own copy of the thesis, or an electronic presentation. The speech is to be delivered independently, in the scope of 10 min. The student may use computer technology. The thesis is available to the committee before and during the defence.

Literature:

1. KATUŠČÁK, D. Ako písať vysokoškolské a kvalifikačné práce. Bratislava: Enigma, 2004.
2. Smernica rektora o úprave, registrácii, sprístupnení a archivácii záverečných prác na Univerzite J. Selyeho – dostupné na https://www.ujs.sk/documents/%C3%9A.Z.Smernica2-2021vrat.dodatkov1-2.pdf

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Undergraduate theses are supervised by the staff of the Department of Informatics. The defence of the bachelor's thesis takes place in front of an examination committee, whose members are appointed by the dean.

Evaluation of subjects
Total number of evaluated students: 2

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

Teacher:

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ PGR/25	**Name:** Computer graphics algorithms
Types, range and methods of educational activities: **Form of study:** Lecture / Practical **Recommended extent of course (in hours):** **Per week:** 1 / 2 **For the study period:** 13 / 26 **Methods of study:** present	
Number of credits: 4	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The course ends with a written exam, for which students can get 50% of the total number of points. During the semester, students pass two written tests, for which they can receive 30% points from the total number of points, and also 20% for the semester project. In addition to contact teaching, students prepare for laboratory exercises, prepare for written tests, and prepare for the exam. To receive grade A in the course, student must obtain at least 90 points, for grade B at least 80 points, for grade C at least 70 points, for grade D at least 60 points and for grade E at least 50 points. Credits will not be given to a student who obtain less than 50 points.	
Results of education: Knowledge: After completing the subject, the student: • knows the terminology, algorithms, principles and procedures used in computer graphics, • has deeper theoretical knowledge in the field of design and use of computer graphics algorithms, • knows the raster graphics and vector graphics algorithms used in computer graphics, • knows basic graphics formats, their structure and practical use, • knows basic surface modeling algorithms and visibility solutions. Skills: After completing the subject, the student: • can analyze and solve more complex problems, • is able to implement computer graphics algorithms in practice, • is able to solve basic problems of raster and vector graphics at the program level, • is able to choose suitable algorithms with respect to hardware parameters, • is able to choose and use modern procedures. Competencies: After completing the subject, the student: • knows how to work efficiently and implement acquired theoretical knowledge, • has an active and responsible approach to completing tasks, • shows independence in solving more complex problems.	

Brief syllabus:

1. Introduction to image processing and computer graphics.
2. Characterization of raster images, their acquisition and visualisation.
3. Color models and the human visual system.
4. Raster graphics formats.
5. Methods of raster image compression.
6. Image processing – highlighting, noise reduction, etc.
7. Stereograms, optical illusions.
8. Characterization of vector images.
9. Curves and surfaces.
10. Geometric transformations.
11. Visibility of objects.
12. Lighting and shading.
13. Fractals in computer graphics.

Literature:

1. GAMBETTA, G. (2021). Computer Graphics from Scratch. No Starch Press. ISBN: 9781718500761
2. SOBOTA, B. – MILIÁN, J.: Grafické formáty. České Budejovice : Kopp, 1996, s. 157. ISBN 80-85828-58-8.
3. CHAPMAN, N. - CHAPMAN, J.: Digital multimedia. John Wiley & Sons, Second Edition, 2003, s. 700. ISBN 0470858907.
4. SZIRMAY - KALOS, L.: Háromdimenziós grafika, animáció és játékfejlesztés. Budapest : ComputerBooks, 2004, s. 486. ISBN 9636183031.
5. SZIRMAY - KALOS, L.: Számítógépes grafika. Budapest : ComputerBooks, 2003, s. 334. ISBN 963 618 208 6.
6. TAKÁČ, O.: A számítógépes grafika. Komárno. Selye János Egyetem, 370 s. ISBN 978-80-8122-182-8.
7. BUDAI, A.: A számítógépes grafika. Budapest, 2003, 390 s. LSI Oktatóközpont, ISBN 9635772432.
8. SZIRMAY, L.: Számítógépes grafika. Budapest 2003, 334 s. ComputerBooks, ISBN 963 618 208 6.
9. ŽÁRA, J. a kol: Moderní počítačová grafika, Brno 2010, 608 s., Computer Press a.s., ISBN 80-251-0454-0.
10. HIDEGKUTI, G.: Vinnay, P. Digitálisképalkotás. Budapest, 2001, 196 s., ViviCom Kiadói és Kommunikációs Kft., ISBN 9789630088533.
11. FÜZI, J.: Grafikai alkalmazások Delphi nyelven. Budapest, 2000, 322 s., ComputerBooks, ISBN 963 618 236 1.

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:

Distribution of the student's workload:
40% of the workload - direct teaching, preparation for the tests and the exam.
60% of the workload - studying the literature, practicing the acquired knowledge, work on practical assignments, work on the semester project.

Evaluation of subjects

Total number of evaluated students: 17

A	B	C	D	E	FX
0.0	0.0	11.76	35.29	52.94	0.0
Teacher: Ing. Ondrej Takáč, PhD.,					
Date of last update: 19.03.2025					
Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.					

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ PPX4/25	**Name:** Pedagogical practice IV.
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week: For the study period:** 20s **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study: 2.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The final assessment is portfolio-based, i.e. based on work produced during the teaching practice. The conditions and criteria for passing the course are set and regulated by the Directive of the Dean of the Faculty of Education UJS: Principles of pedagogical practice at the Faculty of Education UJS. The student is obliged to follow the relevant part of this document related to the pedagogical practice (PPX4). Mandatory components of the portfolio: - Completed protocol on completion of the pedagogical practice - Professional analysis of observed lessons and completed observation sheets - Preparation, implementation and subsequent evaluation and analysis of the lesson implemented - Documentation of the teaching practice including annexes. Final course grade: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. A grade of FX is awarded if the student achieves less than 50% of the total number of points. Total student workload: 2 credits = 50 hours (20 hours of teaching practice: 5 hours of observation, 5 hours of analysis of observed lessons, 5 hours of teaching, 5 hours of analysis of taught lessons; 30 hours of preparation: preparation for teaching practice - consultation with the trainee teacher, preparation for tutorials, preparation for lessons, preparation of portfolio and documentation)	
Results of education: Knowledge: - The student of the course is able to observe, analyze activities at the 2nd grade elementary and middle school levels. - The student is able to professionally evaluate observed activities and activities at the Elementary and Middle School Level 2. - The student is able to document observed activities and activities at grade 2 elementary and middle school. - The student is able to navigate school documents. - The student knows and is oriented to the structure of personnel and material support for school functioning. - The student knows the specific activities of the teacher during the day, in the classroom and in the course of teaching the subjects of his/her specialisation in primary and secondary school.	

- The student understands the environment, culture and organisation of primary and secondary school activities.
Skills:
- Can identify diverse manifestations of structural elements of personality, psychological processes of the pupil in the process of teaching and in social interactions.
- Knows the specific activities of the teacher implemented during the day, in the context of teaching and in the course of teaching the subjects of his/her specialisation in primary and secondary school.
- Identifies the teaching objectives formulated by the teacher, the processes used to achieve them and the extent to which they are met.
- Can identify the teaching methods applied during the lesson.
- Describes the didactic aids, communication technologies and resources used in the teaching process and the possibilities of applying computers, interactive whiteboards, the Internet, specific teaching programmes and software, dynamic systems and interactive teaching materials and portals in the teaching of the subjects of his/her specialisation.
- Describes the processes of student assessment in the teaching process.
- Identifies teachers' teaching and communication styles and professional skills.
- Can process, evaluate, and reflect on observation results in the context of educational theory.
- The student can recognize his/her own level of competence.
- The student can identify common professional problems, investigate and formulate the theoretical and practical background necessary to solve them and address them (using practical procedures in practice).
- The student is able to recognise talented pupils, pupils with difficulties or special educational needs, disadvantaged pupils, multiply disadvantaged pupils and pupils requiring special treatment, to provide them with adequate advice regarding their entry into the labour market.
- The graduate of the course is capable of didactically correct written preparation (with all its components) for the purpose of conducting a lesson with elements of creativity, independence, individualization and alternativeness.
- He/she is able to consult his/her own written preparation with the trainee teacher in a professional manner.
- Is able to adequately prepare the conditions for, implement and evaluate a designated lesson.
- Is able to document results, professionally describe reflection and self-reflection in relation to the planned, prepared, implemented and evaluated lesson.
Competencies:
- Takes a position on observed phenomena based on prior theoretical knowledge.
- Undertakes self-reflection and receives feedback on own output from pupils, peers and trainee teacher.
- Presents responsibly own personal characteristics, communication style, values and professional skills.
- Provides feedback and assesses pupils' learning outcomes in accordance with the assessment principles at the appropriate level of education.
- Promotes interaction between pupils.
- Accepts the manifestations of pupil individuality in the context of the formal social group within the school classroom, the particularities of pupils' learning, specific educational needs and applies elements of differentiation in teaching.
- It implements classroom teaching, applying teaching methods, strategies, resources and aids and information and communication technologies optimised by the disciplinary-didactic theory of its specialisation.

- Understands the relationship between the principles of teaching and the consequences - the effectiveness of learning.
- Reflects on own pedagogical skills.
- The student will be able to undertake targeted development of self-knowledge related to the teaching profession
- The student will be able to independently plan activities that extend knowledge related to the teaching profession.
- The student will be able to create an atmosphere of trustworthiness, helpful, encouraging, attentive, accepting behavior, openness to recognize and manage the work style of others.
- The student will optimize the atmosphere in the learning group (school classroom) and create a stimulating and non-threatening environment for teaching and student learning, by applying techniques of rule following and safe working conditions and methods of motivating and activating students.

Brief syllabus:

1. Observation and evaluation of the interior and exterior of the training primary and secondary school.
2. Getting to know and working with pedagogical documentation of the classroom and school.
3. Observation of the creation of conditions, implementation and evaluation of lessons at the 2nd level of the Primary School and the Secondary School.
4. Professional analysis of the observed lessons together with the trainee teacher.
5. Documentation of the process and results of the individual lessons observed.
6. Didactic procedures in the preparation of written preparations (with all its components), consultation with the trainee teacher.
7. Preparation of the conditions for the implementation of the lesson.
8. Implementation of the planned and prepared lesson with the application of innovative strategies, using adequate teaching resources of primary and secondary schools.
9. Evaluating the lesson with planned and selected methods and means of evaluation from own perspective, from the perspective of the pupils (and with elements of self-evaluation).
10. Professional analysis with the trainee teacher: documenting, evaluating preparation and its use and other components of the lesson.
11. Preparation of a portfolio of the hospitalization activity with all its components based on predetermined criteria by the head of the teaching practice, with the application of autonomy and alternativeness based on current trends in didactics.

Literature:

1. State Educational Program for the 2nd Stage of Primary Schools in the Slovak Republic ISCED 2 – Lower Secondary Education https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced2_spu_uprava.pdf
2. State Educational Program for Gymnasiums in the Slovak Republic ISCED 3A – Upper Secondary Education https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced3_spu_uprava.pdf
3. Act No. 245/2008 Coll. – Act on Education and Training (School Act) and on Amendments and Supplements to Certain Acts Bratislava : MŠ SR, 2008 (or the current School Act)
4. Current Internal Regulation of UJS Principles of Implementation of Pedagogical Practice at the Faculty of Education of UJS
5. Gadušová, Z. a kol.: Mentor Training : Ostrava : Ostravská univerzita, 2021. - online, 268 s. - ISBN 978-80-7599-294-9.

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:
Student workload distribution:
40% - teaching practice,
60% - preparation for teaching practice, preparation of documentation.

Evaluation of subjects
Total number of evaluated students: 11

A	B	C	D	E	FX
90.91	9.09	0.0	0.0	0.0	0.0

Teacher: PaedDr. Krisztina Czakóová, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ PPX5/25	**Name:** Pedagogical practice V.
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week: For the study period:** 20s **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The final assessment is portfolio-based, i.e. based on work produced during the teaching practice. The conditions and criteria for passing the course are set and regulated by the Directive of the Dean of the Faculty of Education UJS: Principles of pedagogical practice at the Faculty of Education UJS. The student is obliged to follow the relevant part of this document related to the pedagogical practice (PPX5). Mandatory components of the portfolio: - Completed protocol on completion of the pedagogical practice - Professional analysis of observed lessons and completed observation sheets - Preparation, implementation and subsequent evaluation and analysis of the lesson implemented - Documentation of the teaching practice including annexes. Final course grade: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. A grade of FX is awarded if the student achieves less than 50% of the total number of points. Total student workload: 2 credits = 50 hours (20 hours of teaching practice: 5 hours of observation, 5 hours of analysis of observed lessons, 5 hours of teaching, 5 hours of analysis of taught lessons; 30 hours of preparation: preparation for teaching practice - consultation with the trainee teacher, preparation for tutorials, preparation for lessons, preparation of portfolio and documentation)	
Results of education: Knowledge: - The student of the course is able to observe, analyze activities at the 2nd grade elementary and middle school levels. - The student is able to professionally evaluate observed activities and activities at the Elementary and Middle School Level 2. - The student is able to document observed activities and activities at grade 2 elementary and middle school. - The student is able to navigate school documents. - The student knows and is oriented to the structure of personnel and material support for school functioning. - The student knows the specific activities of the teacher during the day, in the classroom and in the course of teaching the subjects of his/her specialisation in primary and secondary school.	

- The student understands the environment, culture and organisation of primary and secondary school activities.
Skills:
- Can identify diverse manifestations of structural elements of personality, psychological processes of the pupil in the process of teaching and in social interactions.
- Knows the specific activities of the teacher implemented during the day, in the context of teaching and in the course of teaching the subjects of his/her specialisation in primary and secondary school.
- Identifies the teaching objectives formulated by the teacher, the processes used to achieve them and the extent to which they are met.
- Can identify the teaching methods applied during the lesson.
- Describes the didactic aids, communication technologies and resources used in the teaching process and the possibilities of applying computers, interactive whiteboards, the Internet, specific teaching programmes and software, dynamic systems and interactive teaching materials and portals in the teaching of the subjects of his/her specialisation.
- Describes the processes of student assessment in the teaching process.
- Identifies teachers' teaching and communication styles and professional skills.
- Can process, evaluate, and reflect on observation results in the context of educational theory.
- The student can recognize his/her own level of competence.
- The student can identify common professional problems, investigate and formulate the theoretical and practical background necessary to solve them and address them (using practical procedures in practice).
- The student is able to recognise talented pupils, pupils with difficulties or special educational needs, disadvantaged pupils, multiply disadvantaged pupils and pupils requiring special treatment, to provide them with adequate advice regarding their entry into the labour market.
- The graduate of the course is capable of didactically correct written preparation (with all its components) for the purpose of conducting a lesson with elements of creativity, independence, individualization and alternativeness.
- He/she is able to consult his/her own written preparation with the trainee teacher in a professional manner.
- Is able to adequately prepare the conditions for, implement and evaluate a designated lesson.
- Is able to document results, professionally describe reflection and self-reflection in relation to the planned, prepared, implemented and evaluated lesson.
Competencies:
- Takes a position on observed phenomena based on prior theoretical knowledge.
- Undertakes self-reflection and receives feedback on own output from pupils, peers and trainee teacher.
- Presents responsibly own personal characteristics, communication style, values and professional skills.
- Provides feedback and assesses pupils' learning outcomes in accordance with the assessment principles at the appropriate level of education.
- Promotes interaction between pupils.
- Accepts the manifestations of pupil individuality in the context of the formal social group within the school classroom, the particularities of pupils' learning, specific educational needs and applies elements of differentiation in teaching.
- It implements classroom teaching, applying teaching methods, strategies, resources and aids and information and communication technologies optimised by the disciplinary-didactic theory of its specialisation.

- Understands the relationship between the principles of teaching and the consequences - the effectiveness of learning.
- Reflects on own pedagogical skills.
- The student will be able to undertake targeted development of self-knowledge related to the teaching profession
- The student will be able to independently plan activities that extend knowledge related to the teaching profession.
- The student will be able to create an atmosphere of trustworthiness, helpful, encouraging, attentive, accepting behavior, openness to recognize and manage the work style of others.
- The student will optimize the atmosphere in the learning group (school classroom) and create a stimulating and non-threatening environment for teaching and student learning, by applying techniques of rule following and safe working conditions and methods of motivating and activating students.

Brief syllabus:

1. Observation and evaluation of the interior and exterior of the training primary and secondary school.
2. Getting to know and working with pedagogical documentation of the classroom and school.
3. Observation of the creation of conditions, implementation and evaluation of lessons at the 2nd level of the Primary School and the Secondary School.
4. Professional analysis of the observed lessons together with the trainee teacher.
5. Documentation of the process and results of the individual lessons observed.
6. Didactic procedures in the preparation of written preparations (with all its components), consultation with the trainee teacher.
7. Preparation of the conditions for the implementation of the lesson.
8. Implementation of the planned and prepared lesson with the application of innovative strategies, using adequate teaching resources of primary and secondary schools.
9. Evaluating the lesson with planned and selected methods and means of evaluation from own perspective, from the perspective of the pupils (and with elements of self-evaluation).
10. Professional analysis with the trainee teacher: documenting, evaluating preparation and its use and other components of the lesson.
11. Preparation of a portfolio of the hospitalization activity with all its components based on predetermined criteria by the head of the teaching practice, with the application of autonomy and alternativeness based on current trends in didactics.

Literature:

1. State Educational Program for the 2nd Stage of Primary Schools in the Slovak Republic ISCED 2 – Lower Secondary Education https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced2_spu_uprava.pdf
2. State Educational Program for Gymnasiums in the Slovak Republic ISCED 3A – Upper Secondary Education https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced3_spu_uprava.pdf
3. Act No. 245/2008 Coll. – Act on Education and Training (School Act) and on Amendments and Supplements to Certain Acts Bratislava : MŠ SR, 2008 (or the current School Act)
4. Current Internal Regulation of UJS Principles of Implementation of Pedagogical Practice at the Faculty of Education of UJS
5. Gadušová, Z. a kol.: Mentor Training : Ostrava : Ostravská univerzita, 2021. - online, 268 s. - ISBN 978-80-7599-294-9.

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:
Student workload distribution:
40% - teaching practice,
60% - preparation for teaching practice, preparation of documentation.

Evaluation of subjects
Total number of evaluated students: 11

A	B	C	D	E	FX
90.91	0.0	9.09	0.0	0.0	0.0

Teacher: PaedDr. Krisztina Czakóová, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ PPX6/25	**Name:** Pedagogical practice VI.
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week: For the study period:** 40s **Methods of study:** present	
Number of credits: 4	
Recommended semester/trimester of study: 4.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The final assessment is portfolio-based, i.e. based on work produced during the teaching practice. The conditions and criteria for passing the course are set and regulated by the Directive of the Dean of the Faculty of Education UJS: Principles of pedagogical practice at the Faculty of Education UJS. The student is obliged to follow the relevant part of this document, related to the exit continuous pedagogical practice (PPX6). Mandatory components of the portfolio: - Completed protocol on completion of the teaching practice - Professional analysis of observed lessons and completed observation sheets - Preparation, implementation and subsequent evaluation and analysis of the lesson - Documentation of the teaching practice including annexes. Final course grade: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. A grade of FX is awarded if the student achieves less than 50% of the total number of points. Total student load: 4 credits = 100 hours (40 hours of teaching practice: 10 hours of observation, 10 hours of analysis of observed lessons, 10 hours of teaching, 10 hours of analysis of taught lessons; 60 hours of preparation: preparation for teaching practice - consultation with the trainee teacher, preparation for tutorials, preparation for lessons, preparation of portfolio and documentation)	
Results of education: Knowledge: - The student of the course is able to observe, analyze activities at the 2nd grade elementary and middle school levels. - The student is able to professionally evaluate observed activities and activities at the Elementary and Middle School Level 2. - The student is able to document observed activities and activities at grade 2 elementary and middle school. - The student is able to navigate school documents. - The student knows and is oriented to the structure of personnel and material support for school functioning. - The student knows the specific activities of the teacher during the day, in the classroom and in the course of teaching the subjects of his/her specialisation in primary and secondary school.	

- The student understands the environment, culture and organisation of primary and secondary school activities.
Skills:
- Can identify diverse manifestations of structural elements of personality, psychological processes of the pupil in the process of teaching and in social interactions.
- Knows the specific activities of the teacher implemented during the day, in the context of teaching and in the course of teaching the subjects of his/her specialisation in primary and secondary school.
- Identifies the teaching objectives formulated by the teacher, the processes used to achieve them and the extent to which they are met.
- Can identify the teaching methods applied during the lesson.
- Describes the didactic aids, communication technologies and resources used in the teaching process and the possibilities of applying computers, interactive whiteboards, the Internet, specific teaching programmes and software, dynamic systems and interactive teaching materials and portals in the teaching of the subjects of his/her specialisation.
- Describes the processes of student assessment in the teaching process.
- Identifies teachers' teaching and communication styles and professional skills.
- Can process, evaluate, and reflect on observation results in the context of educational theory.
- The student can recognize his/her own level of competence.
- The student can identify common professional problems, investigate and formulate the theoretical and practical background necessary to solve them and address them (using practical procedures in practice).
- The student is able to recognise talented pupils, pupils with difficulties or special educational needs, disadvantaged pupils, multiply disadvantaged pupils and pupils requiring special treatment, to provide them with adequate advice regarding their entry into the labour market.
- The graduate of the course is capable of didactically correct written preparation (with all its components) for the purpose of conducting a lesson with elements of creativity, independence, individualization and alternativeness.
- He/she is able to consult his/her own written preparation with the trainee teacher in a professional manner.
- Is able to adequately prepare the conditions for, implement and evaluate a designated lesson.
- Is able to document results, professionally describe reflection and self-reflection in relation to the planned, prepared, implemented and evaluated lesson.
Competencies:
- Takes a position on observed phenomena based on prior theoretical knowledge.
- Undertakes self-reflection and receives feedback on own output from pupils, peers and trainee teacher.
- Presents responsibly own personal characteristics, communication style, values and professional skills.
- Provides feedback and assesses pupils' learning outcomes in accordance with the assessment principles at the appropriate level of education.
- Promotes interaction between pupils.
- Accepts the manifestations of pupil individuality in the context of the formal social group within the school classroom, the particularities of pupils' learning, specific educational needs and applies elements of differentiation in teaching.
- It implements classroom teaching, applying teaching methods, strategies, resources and aids and information and communication technologies optimised by the disciplinary-didactic theory of its specialisation.

- Understands the relationship between the principles of teaching and the consequences - the effectiveness of learning.
- Reflects on own pedagogical skills.
- The student will be able to undertake targeted development of self-knowledge related to the teaching profession
- The student will be able to independently plan activities that extend knowledge related to the teaching profession.
- The student will be able to create an atmosphere of trustworthiness, helpful, encouraging, attentive, accepting behavior, openness to recognize and manage the work style of others.
- The student will optimize the atmosphere in the learning group (school classroom) and create a stimulating and non-threatening environment for teaching and student learning, by applying techniques of rule following and safe working conditions and methods of motivating and activating students.

Brief syllabus:

1. Observation and evaluation of the interior and exterior of the training primary and secondary school.
2. Getting to know and working with pedagogical documentation of the classroom and school.
3. Observation of the creation of conditions, implementation and evaluation of lessons at the 2nd level of the Primary School and the Secondary School.
4. Professional analysis of the observed lessons together with the trainee teacher.
5. Documentation of the process and results of the individual lessons observed.
6. Didactic procedures in the preparation of written preparations (with all its components), consultation with the trainee teacher.
7. Preparation of the conditions for the implementation of the lesson.
8. Implementation of the planned and prepared lesson with the application of innovative strategies, using adequate teaching resources of primary and secondary schools.
9. Evaluating the lesson with planned and selected methods and means of evaluation from own perspective, from the perspective of the pupils (and with elements of self-evaluation).
10. Professional analysis with the trainee teacher: documenting, evaluating preparation and its use and other components of the lesson.
11. Preparation of a portfolio of the hospitalization activity with all its components based on predetermined criteria by the head of the teaching practice, with the application of autonomy and alternativeness based on current trends in didactics.

Literature:

1. State Educational Program for the 2nd Stage of Primary Schools in the Slovak Republic ISCED 2 – Lower Secondary Education https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced2_spu_uprava.pdf
2. State Educational Program for Gymnasiums in the Slovak Republic ISCED 3A – Upper Secondary Education https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced3_spu_uprava.pdf
3. Act No. 245/2008 Coll. – Act on Education and Training (School Act) and on Amendments and Supplements to Certain Acts Bratislava : MŠ SR, 2008 (or the current School Act)
4. Current Internal Regulation of UJS Principles of Implementation of Pedagogical Practice at the Faculty of Education of UJS
5. Gadušová, Z. a kol.: Mentor Training : Ostrava : Ostravská univerzita, 2021. - online, 268 s. - ISBN 978-80-7599-294-9.

Language, knowledge of which is necessary to complete a course:

Hungarian or Slovak

Notes:
Student workload distribution:
40% - teaching practice,
60% - preparation for teaching practice, preparation of documentation.

Evaluation of subjects
Total number of evaluated students: 17

A	B	C	D	E	FX
94.12	5.88	0.0	0.0	0.0	0.0

Teacher: PaedDr. Krisztina Czakóová, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ TWS/25	**Name:** Creation of web pages
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Students are required to actively participate in classes and study the relevant literature. During the exercises, they have to solve predetermined tasks. During the semester, two credit papers are written on the main topics of the subject (HTML5/CSS, JavaScript/jQuery). Papers are mandatory and must be evaluated separately, at least 50% of the point evaluation. In the last week, it is possible to replace insufficient and missing transcripts. The student is classified according to the obtained average from the tests. To obtain an A grade, it is necessary to obtain an average of at least 90%, for B at least 80%, for C at least 70%, for D at least 60% and for E evaluation at least 50%. Credits will not be awarded for a course if the student does not pass at least 50%.	
Results of education: Knowledge: After completing the course, the student will be familiar with the basics of HTML, CSS, JavaScript, jQuerry and Bootstrap, as well as with the possibilities of creating and testing responsive, dynamic websites on different devices. The student knows how the DOM works and how to manipulate the structure, content and styles of web pages. Skills: After completing the subject, the student can create a basic responsive website (using text formatting, using tables, images, styles). He/she is capable of creating multimedial , interactive websites (variables, cycles, content generation, graphics) and using simpler graphic elements. Competencies: After completing the course, the student is characterized by independence in the design of static and dynamic user interfaces in the development of websites.	
Brief syllabus: 1. Basics of HTML - history, usage, structure. 2. HTML settings, document structure, language syntax, standards, declarations. 3. Basics of CSS, basic formatting techniques. 4. Advanced use of CSS - responsive design, flexbox, grid. 5. HTML5 - text formatting, fonts, links, lists, tables.	

6. Media Queries and responsive web design - optimising websites for different screen sizes, mobile friendly design principles.
7. Bootstrap basics - components, grid system, responsive design.
8. JavaScript basics - variables, operators, control structures.
9. Functions, event handling, DOM manipulation.
10. Managing forms using JavaScript.
11. Creating animations and interactive elements using JavaScript.
12. Introduction to jQuery - syntax, DOM handling, event handling, AJAX.
13. Graphical capabilities of HTML5 - Canvas basics.

Literature:

1. MONCUR, M.: Tanuljuk meg a JavaScript használatát 24 óra alatt. 1. vyd. Budapest : Kiskapu, 2006. 455s. ISBN 963 9637 16 5.
2. WENZ, Ch.: JavaScript zsebkönyv. 1. vyd. Budapest : Kiskapu Kft., 2006. 275 s. ISBN 978 963 9637 22 1.
3. KOTSIS, D. - LÉGRÁDI, G. - NAGY, G. - SZÉNÁSI, S.: "Többnyelvű programozástechnika", Budapest, Magyarország, Panem Kiadó, 2007, ISBN: 9789635454723
4. SZÉNÁSI, S.: "Java programozási nyelv oktatása C# alapokon", Informatika a felsőoktatásban, Debrecen, Magyarország, 2008, pp. 1-7.
5. SZÉNÁSI, S. - JANKÓ, D.: "Orbit - Internetes, közúti közlekedésbiztonsági döntéstámogató rendszer", 6th European Transport, Budapest, Magyarország, 2007, pp. 131-136.
6. LAWSON, B.: Bemutatkozik a HTML 5. - 1. vyd. - Budapest : Perfact Kiadó, 2013. - 226 s. - ISBN 978-963-9929-28-9.
7. Duckett, J.: HTML & CSS : Desing and Build Websites. 1. vyd. Indianapolis : John Wiley & Sons, 2011. 490 s. ISBN 978-1-118-00818-8.
8. SCHAUMBURG JENSEN, J.: "The Missing Bootstrap 5 Guide: Customize and extend Bootstrap 5 with Sass and JavaScript to create unique website designs", Packt Publishing Limited, 2022, ISBN 978-1801076432.
9. Duckett, J.: “JavaScript and jQuery: Interactive Front-End Web Development”, John Wiley & Sons, 2014. ISBN 978-1118531648.

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Students’ load distribution:
80% - participation in lessons, preparation for examinations,
20% - study of professional literature, practice of acquired knowledge, work on programming tasks.

Evaluation of subjects
Total number of evaluated students: 9

A	B	C	D	E	FX
55.56	11.11	22.22	11.11	0.0	0.0

Teacher: Mgr. Dávid Paksi, PhD., prof. Sándor Szénási, PhD.,

Date of last update: 20.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ UUI/25	**Name:** Introduction to artificial intelligence
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: During the semester, students study relevant professional literature, participate in lectures. They take two midterm written tests, which they must score at least 50-50% on in order to be allowed to take the exam. The course ends with an oral examination. Classification is determined by the average of the 2 graded written tests (50%) and the oral exam (50%). An average of at least 90% is required for a grade of A, at least 80% for a grade of B, at least 70% for a grade of C, at least 60% for a grade of D, and at least 50% for a grade of E.	
Results of education: Knowledge: Upon completion of the course, students will gain a comprehensive understanding of the development and applications of artificial intelligence. Skills: After completing the course, students are able to use artificial intelligence using the Python programming language. Competences: After completing the course, students are able to identify the usefulness of AI in a given field and decide whether it is really worth using in that field.	
Brief syllabus: 1. The idea of artificial intelligence. 2. The development of artificial intelligence up to the 90s. 3. Breakthroughs in the field of artificial intelligence (multi-layer networks). 4. Artificial intelligence today (application, learning methods). 5. Artificial intelligence as a human defeater (deep learning). 6. Limitations of artificial intelligence, limits of its applicability. 7. Artificial intelligence and the python programming language. 8. Possibilities of development of artificial intelligence in python I. 9. Possibilities of development of artificial intelligence in python II. 10. Possibilities of artificial intelligence development in python III. 11. Development potential of artificial intelligence in python IV. 12. Development potential of artificial intelligence in python V. (data mining) 13. Artificial intelligence in python VI. (text mining)	
Literature:	

1. NORVIG, P. – RUSSELL, S.J. : Mesterséges intelligencia: modern megközelítés. Panem, Budapest, 2000. 1094 s. ISBN: 9635452411
2. PÜSPÖK, Ch. M. : Mintafelismerés és gépi tanulás
3. Shai Shalev-Shwartz és Shai Ben-David : Understanding Machine Learning: From Theory to Algorithms. Cambridge University Press. 2014. 449 s.

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Distribution of students' workload:
40% - participation in classes, preparation for examinations and exams, 60% - study of literature, preparation of term papers.

Evaluation of subjects
Total number of evaluated students: 21

A	B	C	D	E	FX
61.9	28.57	4.76	0.0	4.76	0.0

Teacher: Dr. habil. Dr. Gábor Kiss, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ DOC-m/25	**Name:** Volunteering, helping activities
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week: For the study period:** 20s **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The final assessment is a portfolio, i.e. based on the work produced during the volunteering activity (30 points). The conditions for completing the course are set and regulated by the Directive of the Dean of the Faculty of Education UJS: Principles of pedagogical practice at the Faculty of Education UJS student is obliged to follow the relevant part of this document, related to the pedagogical practice. Students shall prepare the following documents during their volunteer activity. He/she is obliged to submit an accurately and bilingually completed protocol on the completion of the volunteer activity and to create a portfolio based on a previously created and consulted structure. Mandatory components of the portfolio: - The portfolio must include a bilingually completed volunteering protocol. - The portfolio must include the structure of the volunteering organisation (observation of the different non-formal learning activities) (10 points) - The portfolio must include the activities of their work in the field carried out during the volunteering activity (10 points) - Documentation of the period (preparation for each activity) (10 points). Total student load: 1 credit = 30 hours Participation in 13 hours of practicum (contact hours); 10 hours of preparation for, and participation in, volunteer activities; 7 hours of portfolio preparation.	
Results of education: Knowledge: • The student can monitor, analyse, volunteer activities. • The student will be able to document the activities observed in the volunteer organization, • The student will be able to plan, organize and conduct individual education and leisure activities in the organization. • The student is able to build positive interpersonal relationships with the organization's leadership and to establish positive relationships with people. Skills:: • The student will be able to work with members of the volunteer organization. • The student will be able to participate actively in the activities of the organization.	

• Through informal activities, the student will be able to manage, organize and create an event for a voluntary organization. Competences:
• The student will be able to apply the knowledge and skills required for positive interpersonal relationships to a given volunteer organization, which may influence future professional choices.
• The student will be able to develop a targeted self-awareness of volunteering.
• The student will be able to design their own activities to enhance their knowledge in voluntary organizations.
• The student will be able to create an atmosphere of reliable, helpful, encouraging, attentive and accepted conduct, it is open to learning about and managing the working style of volunteer organizations.

Brief syllabus:
Observation and evaluation of interior and exterior spaces in a voluntary organisation. Observation of the creation of conditions for the implementation of activities in the voluntary organisation. Professional analysis of the observed activities together with the staff of the voluntary organisation. Documenting the progress and results of the individual activities observed. Preparation of a portfolio of the observation activity with all its components based on predetermined criteria by the course leader, with the application of autonomy and alternativeness based on current trends.

Literature:
Aktuálny vnútorný predpis UJS: Zásady realizácie pedagogickej praxe na Pedagogickej fakulte UJS, https://www.ujs.sk/documents/SHK_2017_24_04_18_Fin3.doc.pdf Cserepesová. Erika: A nonprofit szervezetek sikerének kulcsa Komárno : Selye János Egyetem, 2010. - DM.3301-EF.10.30A.5A. - 108 s. Pusztai Gabriella, Lukács Ágnes: KözössÉGteremtők : Tisztelgés a magyar vallásszociológusok nagy nemzedéke előtt / - 1. vyd. – Debrecen, Debreceni Egyetemi Kiadó, 2014. - 406 s. - ISBN 978-963-318-424-0. Salamon Judit , Papp Zsolt: Önkéntesség és önszerveződés segítése- Civil ifjúsági munka, 2012, Salamon Judit, Papp Zsolt: Önkéntesség és önszerveződés segítése, Civil ifjúsági munka Az ifjúságsegítő képzés interprofesszionális fejlesztése, TÁMOP-5.4.4.-09/2-C-2009-0002,2012, ISBN 978-615-5192-09-8, https://oszkdk.oszk.hu/storage/00/00/51/50/dd/1/onkentesseg_v2.pdf Szentpétery Daniel: A Diákhálózat szervezeti kultúrájának elemzése- Komárno : Univerzita J. Selyeho, 2015. - 107 s. Ministerstvo vnútra Slovenskej Republiky - https://www.minv.sk/?ros_dobrovolnictvo Dobrovoľnícke združenia v Komárne - https://www.azet.sk/katalog/obcianske-zdruzenia/komarno/

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 13

a	n
100.0	0.0

Teacher: PaedDr. Alexandra Nagyová, PhD., PaedDr. Beáta Kiss, PhD., Mgr. Katalin Sýkora Hernády, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ EDU/25	**Name:** Pedagogical tools
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: A prerequisite for successful completion of the course is active participation in class, active involvement in discussion and active resolution of the intermediate tasks. The conditions for completing the course are regulated by the Dean's Regulation on the Principles of Pedagogical Practice. The student is required to comply with the Pedagogical Practicum (EDU) sections of this document. Evaluation of the subject: passed 100-50%, failed 49-0%. Total student workload: 1 credit = 30 hours 13 hours participation in exercises (contact hours), 17 hours self-study.	
Results of education: Knowledge: • The student is able to professionally evaluate and document lessons using the EduPage app. • The student can find his/her way around school documents. • The student is aware of the specific activities carried out by the teacher in the EduPage application related to the educational process.. Skills: • Teacher's knowledge of the specific activities carried out in the EduPage application when teaching subjects in his/her field of specialisation. • Describes the student assessment process in the EduPage app. • The learner recognises his/her own level of competence. • The student will be able to identify common professional problems, to find, formulate and solve them from a theoretical and practical background (using practical procedures in practice). Competencies: • Takes a position on observed phenomena on the basis of previous theoretical knowledge. • The student will be able to independently plan activities that will enhance knowledge in the context of the teaching profession. • The student will be able to analyse pedagogical situations using the EduPage application. • The student will be able to manage the teaching-learning process through the EduPage application.	

• The student will be able to work with the e-learning interface.

Brief syllabus:
Stručná osnova predmetu:
Log in to the EduPage app
Designing the school's EduPage interface, using the "guest" mode
Documenting lessons, student assessments and grade checks via EduPage
Checking attendance, class register, timetable
Gallery (pictures), payments, catering
Communication with students and parents via EduPage
The e-learning interface, development of interactive tests

Literature:
Ako používať EduPage: https://help.edupage.org/?lang=sk
Aktuálny vnútorný predpis PF UJS: Zásady realizácie pedagogickej praxe na Pedagogickej fakulte UJS
Štátny vzdelávací program pre 2. stupeň základnej školy v Slovenskej republike ISCED 2 – nižšie sekundárne vzdelávanie. https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced2_spu_uprava.pdf
Štátny vzdelávací program pre gymnázia v Slovenskej republike ISCED 3A – Vyššie sekundárne vzdelávanie. https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced3_spu_uprava.pdf
Zákon č. 245/2008 Z. z. – Zákon o výchove a vzdelávaní (školský zákon) a o zmene a doplnení niektorých zákonov. Bratislava : MŠ SR, 2008 (respektíve aktuálny školský zákon).

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 145

a	n
97.93	2.07

Teacher: PaedDr. Tamás Török, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ GPZ/25	**Name:** Global environmental problems
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study: 4.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The condition for passing the subject is active participation in the lecture, and at the end of the semester, we will summarize the new knowledge using a written test. Final grade of the subject: A – 100-90%, B – 89-80%, C – 79-70%, D – 69-60%, E – 59-50%. Achieving 50% of the total points is necessary to award credits. Total student load: 2 credit = 60 hours (13 hours: participation in lectures, 17 hours: self-study and 30 hour preparation for the exam).	
Results of education: The aim of the subject is for the student to acquire knowledge about global environmental problems, with the help of which he will be able to learn about natural systems and their interactions. Likewise, his behaviour's consequences impact his immediate and broader environment globally. According to this knowledge, another goal is to create environmentally conscious behaviour and a sustainable lifestyle. Knowledge: - The student knows the concept of sustainable development. - The student knows the relationship between the environment, society, and the economy and can think at the system level. - The student knows the current state of the biosphere and can describe the causes and consequences of the destruction of nature by human activity. - The student knows the main principles of sustainability, the principles of sustainability education, and the possibilities of developing children's environmental culture. Abilities: - The student can collect independently and process information in the field of sustainability and will be able to identify problems. - The student can identify sustainable and unsustainable processes and their causes. - The student can recognize the connections between global and local problems. - The student can identify changes he can make based on local solutions. - The student can develop and implement a sustainability program in his/her institutional environment. Competencies: - The student has a positive relationship with the phenomena of the biosphere.	

- The student has a sense of responsibility for the future, an environmentally aware approach, and respect for the living and non-living nature.
- The student undertakes to form a positive emotional and ethical attitude towards the environment in his life and surroundings.
- The student can make responsible decisions about nature protection in his own life, which will impact the lives of future generations as well, as he will serve as a role model in environmental awareness.
- As an active citizen, the student is active in pedagogical areas of education within his competencies; he takes responsibility for the ecological formation of his environment, living space, and community.

Brief syllabus:

Subject, factors, and concept of global environmental problems. The concept of the environment. The concept of sustainable development, the origin of the concept, the history of its creation, and individual systems for creating sustainability.
Air characteristics, air problems, sources of air pollution.
Characteristics of the hydrosphere, problems of the hydrosphere, sources of pollution of the hydrosphere.
Characteristics of the lithosphere and pedosphere, problems of the lithosphere and pedosphere, sources of pollution of the pedosphere.
Territorial protection in the nature protection framework and the possibility of reducing environmental pollutants.
Species protection within nature protection - factors threatening plants and animals, ecological impacts of environmental pollution.
General problems of human population growth, noise in big cities, traffic, and construction.
Environmental problems of human settlements, waste, its types, selective collection of waste and its recycling, composting.
Environmental risk factors of human settlements - buildings and their impact on human health, food, contaminants.
Environmental protection - protection of the air, hydrosphere, and pedosphere on a global and individual level
Environmental monitoring, ecological footprint, international cooperation in environmental protection.

Literature:

DARVAY, S., NEMCSÓK, J., FERENCZY, Á.: Fenntartható fejlődés. Polgári szemle: Gazdasági és társadalmi folyóirat, 2016 - 12 (4-6). pp. 88-104. ISSN 1786-6553 https://polgariszemle.hu/images/content/pdf/psz_2016._4-6.szam_7.pdf
HAAS, M., ONDROVÁ, E., ŠVAJDA, J.: Environmentálna výchova/Environmental education. Vydavateľstvo: Ústav vysokohorskej biológie Žilinskej univerzity, 2008, 135 strán
KERÉNYI, A.: Európa természet és környezetvédelme. Nemzeti Tankönyvkiadó, Budapest, 2003
KOVÁTS-NÉMETH, M.: Az erdőpedagógiától a környezetpedagógiáig. Comenius Kft, Pécs, 2010, ISBN 978-963-9687-18-9
KOVÁTS-NÉMETS, M.: Fenntarthatóság, pedagógia, kutatás. - 1. vyd. - Győr : NyugatMagyarországi Egyetem Apáczai Csere János Kar, 2007. - 227 s. - ISBN 978-963-9364-85-1
KRISKA, Gy., MAKLÁRI, J., SCHEUER, ZS.: Gyertek velünk erdei iskolába! Farkaserdei erdei iskola projekt /. - 1. vyd. : Flaccus Kiadó, 2002. - 186 s. - ISBN 963 94 12 07 4.
LÜKŐ, I.: Környezetpedagógia. - Budapest : Nemzeti Tankönyvkiadó, 2003. - 252 s. - ISBN 9631933768.

Language, knowledge of which is necessary to complete a course:
hungarian, slovakian

Notes:

Evaluation of subjects
Total number of evaluated students: 3

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

Teacher: Dr. habil. Sarolta Zsuzsanna Mészárosné Darvay, PhD., Ing. Pavol Balázs, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ KKV/25	**Name:** Quantitative and qualitative pedagogical research methods
Types, range and methods of educational activities: **Form of study:** Lecture / Seminar **Recommended extent of course (in hours):** **Per week:** 1 / 1 **For the study period:** 13 / 13 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Conditions for passing the subject: • active participation in lectures and seminars, • participation in assigned tasks, analyzes and discussions during lectures and seminars, • preparation and submission of a small semester paper presenting your own pedagogical research, using the selected quantitative or qualitative research method. • - successful completion of the exam. Detailed conditions for completing the subject: • Preparation and submission of a semester thesis, in which the student individually presents a chosen pedagogical research/project using the quantitative or qualitative method. The work must meet the criteria and rules of scientific writing, it must be 8-10 pages long. Semester thesis evaluation (50 points): • - Choice of topic, originality 10 points • - Correctness, appropriateness of the choice of research methodology 10 points, • - Implementation of pedagogical research 10 points, • - Content of the thesis 10 points, • - Work with professional literature 10 points. Evaluation of the submitted thesis/pedagogical research: • 50 – 46 points A, • 45 – 41 point B, • 40 – 36 points C, • 35 – 31 points D, • 30 – 26 points E, • 25 – 0 point FX. Evaluation of successful completion of the exam (50 points): • 50 – 46 points A, • 45 – 41 point B, • 40 – 36 points C, • 35 – 31 points D, • 30 – 26 points E, • 25 – 0 point FX.	

The student's total workload in terms of the distribution of working hours: 3 credits = 90 hours
26 hours of participation in lectures and seminars (contact hours); 30 hours of reading literature; 34 hours of preparing and writing the pedagogical research project.
The condition for successful completion of the subject is obtaining at least 50% of the maximum score (100 points) of the subject.
Rating scale:
• A = 90 – 100% (90 – 100 points)
• B = 80 – 89% (80 – 89 points)
• C = 70 – 79% (70 – 79 points)
• D = 60 – 69% (60 – 69 points)
• E = 50 – 59% (50 – 59 points)
• FX = 0 – 49% (0 – 49 points)

Results of education:
The subject provides an insight into the methods of quantitative and qualitative pedagogical research, provides an overview of their main types, characteristics, and peculiarities.
Knowledge
The student...
• knows the methodological connections of empirical research in pedagogical sciences.
• can name the main types of quantitative research, knows their characteristics and rules of application.
• can name the main types of qualitative research, knows their characteristics and rules of application.
• knows the relationship between quantitative and qualitative research methods.
• knows the ethical rules used in pedagogical research.
Abilities
The student...
• can independently apply appropriate quantitative and qualitative research methods.
• can choose the appropriate research method for their own pedagogical research.
• can analyze and evaluate the chosen pedagogical research.
• can formulate the conclusions of their own pedagogical investigation.
• can process quantitative and qualitative pedagogical research in accordance with the rules of academic writing.
• can examine pedagogical phenomena in the field of education.
Competencies
The student...
• can prepare, implement and interpret pedagogical research responsibly and professionally.
• carry out their pedagogical and research work creatively and responsibly.
• strives to continuously renew their knowledge of pedagogy and research methodology.
• has the competences to adapt the results of their pedagogical research in practice.

Brief syllabus:
The main types and characteristics of quantitative research. The main types and characteristics of qualitative research.
The methodology and research practice of quantitative research. Methodology and research practice of qualitative research. Phases of the 8-step research model.
Selection of pedagogical research methods.
Preparation and procedure for the implementation of pedagogical research, scheduling of the research plan. Defining and formulating research goals and hypotheses.
Defining the research questions.

Means of obtaining input and output data, sample selection.
Implementation of pedagogical research - data collection and processing of the planned and defined work phases.
Quantitative / qualitative data analysis. Data evaluation, data processing, illustration.
Interpretation of results, formulation of conclusions and recommendations for pedagogical practice.

Literature:

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Language, knowledge of which is necessary to complete a course:
hungarian , slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 158

A	B	C	D	E	FX
29.75	32.91	14.56	9.49	4.43	8.86

Teacher: prof. Krisztián Józsa, DSc., prof. Péter Tóth, PhD., doc. dr. univ. Agáta Csehiová, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ MKU/25	**Name:** Metacognitive learning
Types, range and methods of educational activities: **Form of study:** Lecture / Seminar **Recommended extent of course (in hours):** **Per week:** 1 / 1 **For the study period:** 13 / 13 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Successful completion of the course requires active participation in lectures and seminars, submission of interim assignments during the semester and successful completion of a written examination. The final grade consists of the points obtained for fulfilling the requirements in the form of: max. 20 points for participation, max. 40 points for the intermediate assignments and max. 40 points for the exam. A student may obtain a maximum of 100 points in total. Final course grade: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. A grade of FX is awarded if the student achieves less than 50% of the total points. Total student workload: 3 credits = 90 hours (26 hours: attendance at lectures and seminars, 32 hours: preparation of continuous assignments during the semester, 32 hours: self-study and preparation for the exam).	
Results of education: After completing the course the student Knowledge: - Knows and understands the concept of metacognition and metacognitive learning strategies. - He/she is familiar with metacognitive methods and the possibilities of their application in the educational process. - Knows the social needs of pupils. - Knows the difficulties and problems of pupils' learning. - Knows the principles of non-violent and constructive communication. - Knows how to work independently (searching and citing relevant sources) with specialist literature. - Is familiar with the professional knowledge, developmental criteria and psychological guidelines for public education participants (preschool, primary and school age, adolescence, adulthood and lifelong learning). - Becomes familiar with methodological approaches, structure and aspects of job descriptions.. - It orients itself to the system, criteria and possibilities of further education of the teaching career. Skills: - Is able to independently and professionally evaluate a variety of teaching situations.	

- Is able to apply and apply adequate methods, aids, organizational forms in the educational process.
- Has basic practical experience in the application of metacognitive methods.
- Can cooperate and consult with other professionals, work in a team.
- Can apply the acquired theoretical knowledge in pedagogical practice.
Competences:
- Reflects own pedagogical skills and forms an independent opinion.
- The learner is able to develop his/her own practices and achieve the set goals.
- Applies non-violent and constructive strategies in solving problems and conflicts.
- Takes responsibility for the mission of his/her school institution.
- Feels responsible for effective resolution of individual learning problems.
- Strives for purposeful development in the area of self-knowledge, continually coaches self.
- The graduate is characterized by creative thinking, independence in planning his/her own education, autonomy and responsibility in decision making in relation to the issues of the field of study.

Brief syllabus:

A pedagogical-psychological interpretation of learning.
Types of learning and teaching activities within the educational process.
Interpretation of the process of metacognition.
Metacognition and self-regulatory learning.
Cognitive and metacognitive strategies, methods, possibilities of their development in the processes of teaching and learning.
Metacognition and learning, planning and organizing lessons using metacognition.
Attitude formation and motivation.
The role of motivation in self-regulated learning.
Optimizing the atmosphere of the educational process (Rogers principles).
Methods based on pupils' activity (activation methods) in the educational process.
Cooperative organization of the educational process (LMS): constructive interdependence, individual and collective responsibility, equal participation - equivalence, parallel interaction, project-based learning, individual differentiation.
Developing critical thinking.
Other roles of the teaching profession: roles of the class teacher, cooperation with parents, family and school relations and communication opportunities
Professional issues in the teaching career: possible difficulties for the beginning teacher, integration, building a professional career, forms and possibilities for further teacher education.

Literature:

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KOVÁCS Zsuzsa (2013): Önszabályozó tanulás: értelmezési módok a kutatási metodológiák tükrében. Neveléstudomány, 1. sz. 124-136. http://nevelestudomany.elte.hu/downloads/2013/nevelestudomany_2013_1_124-136.pdf [2022. 02. 05.]

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RÉTHY Endréné (2003): Motiváció, tanulás, tanítás: miért tanulunk jól vagy rosszul? Nemzeti Tankönyvkiadó, Budapest. ISBN 963 19 4466 2
HORVÁTHOVÁ Kinga, NÉMETH András, STRÉDL Terézia, SZABÓOVÁ Edita, TÓTH-BAKOS Anita : Szlovák-magyar pedagógiai terminológiai kézikönyv = Slovensko-maďarská pedagogická terminologická príručka : Komárno : Univerzita J. Selyeho, 2015. - 132 s. - ISBN 978-80-8122-160-6
GADUŠOVÁ, Z. a kol.: Mentor Training : Ostrava : Ostravská univerzita, 2021. - online, 268 s. - ISBN 978-80-7599-294-9.

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 117

A	B	C	D	E	FX
5.98	23.08	28.21	26.5	15.38	0.85

Teacher: Mgr. Anita Tóth-Bakos, PhD., prof. Péter Tóth, PhD., prof. Krisztián Józsa, DSc., Dr. habil. Aranka Híves-Varga, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ PHR/25	**Name:** Assessment and development in education

Types, range and methods of educational activities:
Form of study: Lecture / Seminar
Recommended extent of course (in hours):
Per week: 1 / 1 **For the study period:** 13 / 13
Methods of study: present

Number of credits: 3

Recommended semester/trimester of study: 4.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
Lecture – Written colloquium based on the topics of the lecture and the indicated literature.
Seminar – Completion of all assignments submitted during the semester (max 3 points/ assignments) and their submission by a specified deadline (max 1 points/assignments).
At the end of the semester, students create a portfolio of the classroom developmental assessment tools adapted to the subject context they have learned. he categories of the portfolio evaluation are: submission by the deadline, formal requirements (orderliness, logical interdependence, aesthetics) and content requirements (methodology of a developmental evaluation tool, evaluation tool placed in a specific subject context and its educational methodological elaboration) are taken into account.
The points obtained from the assignments make up 30% of the subject performance, while the portfolio makes up 70% of the subject performance.
The summative evaluation of the subject is calculated from the exam and the seminar based on the following:
((2 x % result of written colloquium) + (1 x % result of seminar))/3
Total student workload: 3 credits = 90 hours
26 hours of participation in lectures and seminars (contact hours); 26 hours of working on assignments, 26 hours of self-study/self-training, 12 hours of writing a portfolio.
90-100% for the "A" evaluation, 80-89% for the "B" evaluation, 70-79% for the "C" evaluation, 60-69% for the "D" evaluation and the "E" evaluation requires a success rate of 50-59%.

Results of education:
Students gain the following learning outcomes within the course
Knowledge
The student…
- knows the methodological foundations of the theory and practice of assessment, the forms and types of student assessment and their psychodidactic aspects,
- knows the importance of assessment and feedback in learning,
- can provide an overview of the current assessment trends in education,
- knows the purpose and method of diagnostic, formative and summative assessment,
- knows the role of educational assessment in development,
- knows the methodological guidelines for the evaluation and grading of students,

- knows the strategies of formative assessment in lessons and the methodology of their implementation in the subject context.
Abilities
The student…
- recognizes the differences based on developmental and individual characteristics of students, the need for differentiated development,
- can apply different developmental evaluation forms and methods in a subject context,
- can design and implement assessment tools that provide feedback on learning outcomes,
- can create pedagogical assessment tools for own educational purposes,
- can reflect on the real outcome of learning compared to the learning goals set in advance and take corrective steps in order to achieve those goals.
Competencies
The student…
- has an active and responsible attitude in the performance of tasks,
- able to evaluate without prejudice and stereotypes,
- has basic competencies in the implementation of pedagogical evaluation,
- capable of self-reflection in order to increase their own professional development and efficiency,
- can work independently, creatively and efficiently,
- can identify with their own profession,
- ‘s suitability in the field of evaluation meets the professional requirements for teachers starting their careers.

Brief syllabus:
Pedagogical assessment.
Evaluation of the teaching-learning process.
Attributes of a reflective teacher.
Characterization of diagnostic and formative tests.
The methodological practice of assessment and development:
- The relationship between educational assessment and development.
- Methodology of developmental tasks.
- Methodology of assessment tools providing simple feedback for the whole classroom.
- Assessment tools of cognitive skills.
- Tools for developmental assessment of cooperative learning process.
- The role of metacognition in learning.
- Assessment as a form of learning. Strategies for self-regulated learning.
- Methodology of writing and evaluating a portfolio.

Literature:

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 109

A	B	C	D	E	FX
24.77	43.12	25.69	4.59	0.92	0.92

Teacher: prof. Krisztián Józsa, DSc., Mgr. Katarína Szarka, PhD., PaedDr. Alexandra Nagyová, PhD.,

Date of last update: 28.03.2025
Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ PKI/25	**Name:** Pedagogical communication and interaction
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study: 2.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The student reflects on the communication situation in the classroom or performs an observational analysis of the interaction situation in the classroom, for which he/she receives a maximum of 100 points. Assessment criteria for reflection: - Reflection of the classroom communication situation reflects that the student has consciously thought about its effectiveness, causes and consequences and has taken into account any problems that may have arisen. (50 points) - For the reflection, the student will use at least 5 literary sources to support his/her own opinion. (10 points) - The reflection includes references to analysis of the student's own work, learning from it, and application of experience (40 points). Evaluative aspects of observing and documenting classroom interaction: - Presentation of lesson analyzed (link to lesson analyzed, short instructional video to be saved in moodle system) (20 points) - Choice of method to be used, justification (40 points) - The observation experience includes references to analysis of the student's own work, learning from it, and application of the experience (40 points). Total student workload - distribution of work hours: 2 credits = 60 work hours: - Attendance at lectures: total for the semester (13 hours). - Research work related to the student's written thesis and its completion (57 working hours). The maximum number of points is 100. A minimum of 50 points, i.e. 50% of the total, is required to pass the course, with the condition that at least half of the points (50%) must be obtained in each assignment. To achieve an A grade, you must obtain 90-100%; for a B grade, 80-89%; for a C grade, 70-79%; for a D grade, 60-69%; and for an E grade, 50-59% of the total points.	
Results of education: Knowledge - The student learns verbal and non-verbal communicative expressions characteristic for social communication, - The student gains experience in standard pedagogical situations (e.g. introducing a new pupil, praising a pupil, specifics of communication with parents, etc.).	

- The student becomes familiar with models for describing classroom interaction and methods for examining it.
Skills
The student will:
- be able to analyze a classroom lesson in terms of pedagogical communication and interaction.
Competencies:
The student will:
- be able to correctly apply the tools of non-verbal communication and paralinguistics in standard pedagogical situations and analyze classroom interactions.

Brief syllabus:

An introduction to communication as a science. Concept, types and dimensions of communication; theories of communication. Historical features of social communication. Man and communication; communication skills of the individual. Verbal communication; practice of verbal expressions. Non-verbal communication and its means of expression.

General characteristics of pedagogical communication. Characteristics and functions of pedagogical communication. Teacher's activity and interaction skills in terms of the effectiveness of teaching and educational work. Teacher's communication style. Effectiveness of teacher communication; characteristics of the symmetrical teacher-pupil relationship. Correspondence between verbal and non-verbal channels. Educational goals and pedagogical communication. Relationships between pedagogical communication and teaching methods. Levels of pedagogical communication.

Communication in the school classroom. Trends in classroom communication: behavioral and quantitative logical-empirical, intuitive and qualitative. Forms of organization and teaching (didactic) methods as a function of pedagogical communication. Pedagogical communication as a function of spatial arrangement, organizational forms and educational (didactic) methods. Monological and dialogical forms of communication. Speech behaviour of pupils. Cooperation between teacher and pupils. Motivation. Presentation and explanation by the teacher. Types of questions for teachers. Discussion based on arguments. Assessment. Praise. Humour and irony in communication. Communication characteristics of cooperative learning organization and project work; communication aimed at promoting critical and reflective thinking. Visual signs, illustration, use of ICT tools in pedagogical communication. Speech behaviour of pupils.

Management and resolution of communicative conflict situations. Regulation of pupils' communication. Expression of expectations. Communication barriers and their release. Assertive communication, non-violent communication, conflict management and communication in practice. Characteristics of communication between teachers and parents.

Written forms of pedagogical communication. Advantages and disadvantages of written communication; genres of scientific communication and their main features.

Pedagogical interaction. Interpretation of the theory and psychology of communication. Pedagogical significance of interaction. Methods that can be used in interaction research: observation by category (Flanders and Bales interaction analysis), investigation of interpersonal behaviour by questionnaire (QTI). Wubbels' model of teacher-pupil interaction and typological personality characteristics. Teacher interpersonal style.

Literature:

DANEK, J. (2014). Pedagogická komunikácia na vysokej škole. 1. vyd. - Trnava : Univerzita sv. Cyrila a Metoda v Trnave, 2014. - 127 s. - ISBN 978-80-8105-614-7.

FORGÓ, S. (2011): A kommunikációelmélet alapjai. Eger: Eszterházy Károly Főiskola. https://regi.tankonyvtar.hu/hu/tartalom/tamop425/0005_03_a_kommelmelet_alapjai_scorm_12/index.html

HORVÁTHOVÁ, K., SZŐKÖL, I. (2016). A pedagógiai kommunikáció. 1. vyd. Komárno: Univerzita J. Selyeho, 2016. 137 s. [7,87 AH]. ISBN 978-80-8122-175-0.
HORVÁTHOVÁ, K., TÓTH, P. (2018). Interakciós stílusról alkotott nézetek vizsgálata pedagógushallgatók körében. In: Új kihívások és pedagógiai innovációk a szakképzésben és a felsőoktatásban: A 8. Trefort Ágoston Szakképzés- és Felsőoktatás-pedagógiai Konferencia tanulmánykötete: 2018, P. 21-55. ISBN 978-963-449-148-4.
HORVÁTHOVÁ, K., TÓTH, P. (2019). Milyen az ideális tanári interakció a pedagógushallgatók szerint?. In: Oktatás - Gazdaság - Társadalom. Juhász Erika, Endrődy Orsolya. Budapest: Magyar Nevelés- és Oktatáskutatók Egyesülete, 2019, P. 389-408. ISBN 978-615-5657-03-0.
HORVÁTHOVÁ, K., TÓTH, P. (2020). Határon túli pedagógushallgatók véleménye a tanári interakcióról. In: Prevenció, intervenció és kompenzáció. Gabriella Hideg, Szilvia Simándi, Irén Virág. Budapest: Debreceni Egyetem, 2020, P. 260-275. ISBN 978-963-318-857-6.
NÉMETH, E. (2002). Az önismeret és a kommunikációs készség fejlesztése. Budapest: Századvég Kiadó, 2002. - 138 s. - ISBN 963 9211 31 1.
ŠUPŠÁKOVÁ, B. a kol. (2016). Slovo a obraz v komunikácii: Komunikačné dimenzie slova a obrazu v primárnom vzdelávaní. 1. vyd. - Brno: Tribun EU, 2016. - 174 s. - ISBN 978-80-263-1026-6.
VAŇKO, J. (1999). Komunikácia a jazyk. 1. vyd. - Nitra: Univerzita Konštantína Filozofa, 1999. - 203 s. - ISBN 80-8050-253-6.

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 144

A	B	C	D	E	FX
85.42	3.47	7.64	0.0	0.69	2.78

Teacher: prof. Péter Tóth, PhD., Dr. habil. Erika Kopp, PhD., Mgr. Anita Tóth-Bakos, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ PKU/25	**Name:** Teacher competencies
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study: 2.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Prerequisites: The student will reflect on a communication or interaction situation in the classroom or conduct an observational analysis related to an individual treatment or learning problem for which a maximum of 100 points will be earned. Assessment criteria for reflection: - Reflection that reflects that the student has consciously thought about its effectiveness, causes and consequences and has taken into account any problems that may have arisen. (50 points) - For the reflection, the student will use at least 5 literary sources to support his/her own opinion. (10 points) - The reflection includes references to analysis of the student's own work, learning from it, and application of experience (40 points). Total student workload - distribution of work hours: 2 credits = 60 work hours: - Attendance at lectures: total for the semester (13 hours). - Research work related to the student's written thesis and its completion (47 working hours). The maximum number of points is 100. A minimum of 50 points, i.e. 50% of the total, is required to pass the course, with the condition that at least half of the points (50%) must be obtained in each assignment. To achieve an A grade, you must obtain 90-100%; for a B grade, 80-89%; for a C grade, 70-79%; for a D grade, 60-69%; and for an E grade, 50-59% of the total points.	
Results of education: Knowledge - The student learns verbal and non-verbal communication expressions characteristic for social communication, - the student gains experience in standard pedagogical situations (e.g. introducing a new pupil, praising a pupil, specifics of communication with parents, etc.). - The student becomes familiar with models for describing classroom interaction and methods for examining it. Skills The student will: - be able to analyze a classroom lesson in terms of pedagogical communication and interaction. Competencies:	

The student will:
- be able to correctly apply the tools of non-verbal communication and paralinguistics in standard pedagogical situations and analyze classroom interactions.
- Be professionally prepared in practice to identify pupils with individual treatment needs.

Brief syllabus:

An introduction to communication as a science. Concept, types and dimensions of communication; theories of communication. Historical features of social communication. Man and communication; communication skills of the individual. Verbal communication; practice of verbal expressions. Non-verbal communication and its means of expression.

General characteristics of pedagogical communication. Characteristics and functions of pedagogical communication. Teacher's activity and interaction skills in terms of the effectiveness of teaching and educational work. Teacher's communication style. Effectiveness of teacher communication; characteristics of the symmetrical teacher-pupil relationship. Correspondence between verbal and non-verbal channels. Educational goals and pedagogical communication. Relationships between pedagogical communication and teaching methods. Levels of pedagogical communication.

Communication in the school classroom. Trends in classroom communication: behavioral and quantitative logical-empirical, intuitive and qualitative. Forms of organization and teaching (didactic) methods as a function of pedagogical communication. Pedagogical communication as a function of spatial arrangement, organizational forms and educational (didactic) methods. Monological and dialogical forms of communication. Speech behaviour of pupils. Cooperation between teacher and pupils. Motivation. Presentation and explanation by the teacher. Types of questions for teachers. Discussion based on arguments. Assessment. Praise. Humour and irony in communication. Communication characteristics of cooperative learning organization and project work; communication aimed at promoting critical and reflective thinking. Visual signs, illustration, use of ICT tools in pedagogical communication. Speech behaviour of pupils.

Management and resolution of communicative conflict situations. Regulation of pupils' communication. Expression of expectations. Communication barriers and their release. Assertive communication, non-violent communication, conflict management and communication in practice. Characteristics of communication between teachers and parents.

Written forms of pedagogical communication. Advantages and disadvantages of written communication; genres of scientific communication and their main features.

Pedagogical interaction. Interpretation of the theory and psychology of communication. Pedagogical significance of interaction. Methods that can be used in interaction research: observation by category (Flanders and Bales interaction analysis), investigation of interpersonal behaviour by questionnaire (QTI). Wubbels' model of teacher-pupil interaction and typological personality characteristics. Teacher interpersonal style.

The development of the pupil's personality, the promotion of individual treatment, appropriate methodological preparedness for the successful education and training of a disadvantaged child with special educational needs or difficulties in integration, learning and behaviour together with other children and pupils. Ongoing assessment and analysis of pupils' personal development.

Facilitating and developing the development of pupil groups and communities, creating opportunities, openness to diverse socio-cultural diversity, integrative activities.

Promoting learning. Arousing and sustaining interest. Creating a confident atmosphere in the classroom. Recognizing and eliminating learning problems.

Literature:

DANEK, J. (2014). Pedagogická komunikácia na vysokej škole. 1. vyd. - Trnava : Univerzita sv. Cyrila a Metoda v Trnave, 2014. - 127 s. - ISBN 978-80-8105-614-7.

FORGÓ, S. (2011): A kommunikációelmélet alapjai. Eger: Eszterházy Károly Főiskola. https://regi.tankonyvtar.hu/hu/tartalom/tamop425/0005_03_a_kommelmelet_alapjai_scorm_12/index.html
HORVÁTHOVÁ, K., SZŐKÖL, I. (2016). A pedagógiai kommunikáció. 1. vyd. Komárno: Univerzita J. Selyeho, 2016. 137 s. [7,87 AH]. ISBN 978-80-8122-175-0.
HORVÁTHOVÁ, K., TÓTH, P. (2018). Interakciós stílusról alkotott nézetek vizsgálata pedagógushallgatók körében. In: Új kihívások és pedagógiai innovációk a szakképzésben és a felsőoktatásban: A 8. Trefort Ágoston Szakképzés- és Felsőoktatás-pedagógiai Konferencia tanulmánykötete: 2018, P. 21-55. ISBN 978-963-449-148-4.
HORVÁTHOVÁ, K., TÓTH, P. (2019). Milyen az ideális tanári interakció a pedagógushallgatók szerint?. In: Oktatás - Gazdaság - Társadalom. Juhász Erika, Endrődy Orsolya. Budapest: Magyar Nevelés- és Oktatáskutatók Egyesülete, 2019, P. 389-408. ISBN 978-615-5657-03-0.
HORVÁTHOVÁ, K., TÓTH, P. (2020). Határon túli pedagógushallgatók véleménye a tanári interakcióról. In: Prevenció, intervenció és kompenzáció. Gabriella Hideg, Szilvia Simándi, Irén Virág. Budapest: Debreceni Egyetem, 2020, P. 260-275. ISBN 978-963-318-857-6.
NÉMETH, E. (2002). Az önismeret és a kommunikációs készség fejlesztése. Budapest: Századvég Kiadó, 2002. - 138 s. - ISBN 963 9211 31 1.
ŠUPŠÁKOVÁ, B. a kol. (2016). Slovo a obraz v komunikácii: Komunikačné dimenzie slova a obrazu v primárnom vzdelávaní. 1. vyd. - Brno: Tribun EU, 2016. - 174 s. - ISBN 978-80-263-1026-6.
VAŇKO, J. (1999). Komunikácia a jazyk. 1. vyd. - Nitra: Univerzita Konštantína Filozofa, 1999. - 203 s. - ISBN 80-8050-253-6.

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 2

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

Teacher: prof. Péter Tóth, PhD., Dr. habil. Erika Kopp, PhD., Mgr. Anita Tóth-Bakos, PhD., Dr. habil. Aranka Híves-Varga, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ POA/25	**Name:** Movement activities
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 2.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The following conditions shall apply to the subject: General conditions for the performance of the subject: • active participation in the course is at least 80%, • various forms of kinesthetic activities: play balls, sultanas, swimming, aerobic exercise, body construction, exercise (kinesthetic activity selected by the student). General conditions for the performance of the subject: • active participation in the course is at least 80%, • course evaluation criteria: active participation, completed — not completed. • Demonstration Of the sporting activity chosen By the student: In the case of game games - demonstration of the training of an attacker and defense; in the case Of swimming, - demonstration of the technical features of different swimming pools; fitness - demonstration of certain basic practices for different muscle groups and without devices; Assessment: Presentation of the elements of the selected sport activity - 20p. Final assessment: A: 100-91% B: 90-81 % C: 80 % TO 71 % D: 70 TO 61 % E: 60-51% FX: 50 % Total student workload: 1 credits = 30 hours participation in 13 hours of practical training (contact); 17 hours of self-training for the specific sport.	
Results of education: Knowledge: The student shall be able to apply the practical skills of the chosen sport. The student recognizes the relationship between the chosen sport and a healthy lifestyle. Capabilities: The student is familiar with the basic features and practices of the chosen sport. The student can expand his knowledge and self-training. Competences: The student can also apply the knowledge acquired to the active use of leisure time. The student is able to independently plan the activity and expand his knowledge.	
Brief syllabus:	

Understand the importance of physical activity as an essential part of everyday life and its impact on mental and physical health. Learn about football/football, table tennis, basketball, flyball rules (according to selected sports activities). Speech - different muscle groups of the body, from several aspects. Preparation of a series of practice in aerob aerobic and step aerobic, aerobic vessels. Stand-alone balls in my gymnasium. According to the selected ball roll. Kinesthetic activities in different load zones — according to the sport activities selected. Preparation of a weekly microcycle plan to improve aerobic capacity.

Literature:

1005 röplabda játék és gyakorlat / Edi Bachmann, Martin Bachmann. - 1. vyd. - Budapest-Pécs : Dialóg Campus Kiadó, 2000. - 344 s. - ISBN 963 9123 84 6.
1006 kosárlabda játék és gyakorlat / Peter Vary. - 1. vyd. - Budapest-Pécs : Dialóg Campus Kiadó, 2001. - 317 s. - ISBN 963 9123 85 4.
1008 torna játék és gyakorlat : Kézikönyv tanároknak, edzőnek, játékosoknak / Ursula Häberling-Spöhel. - 1. vyd. - Budapest - Pécs : Dialóg Campus Kiadó, 2003. - 271 s. - ISBN 963 9310 93 x.
1014 asztalitenisz játék és gyakorlat : Kézikönyv tanároknak, edzőknek, játékosoknak / Harry Blum. - 1. vyd. - Budapest - Pécs : Dialóg Campus Kiadó, 2004. - 323 s. - ISBN 963 9542 07 5.
Die fitnesspyramide / Bob Anderson, Ed Burke. - Ulm : Franz Spiegel Buch GmbH, 1997. - 117 s. - ISBN 3585335258.
Sport a családban / Takács László. - Budapest : Sport, 1973. - 380 s. - ISBN 963 253 512 x.
Pohybová aktivita v životnom štýle dospelých z hľadiska zdravia/ Beáta Dobay-Elena Bendíková, 2016. ISBN 978-963-12-7613-8

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 27

A	B	C	D	E	FX
92.59	0.0	0.0	0.0	0.0	7.41

Teacher: prof. Krisztián Józsa, DSc.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ POP/25	**Name:** Comparative pedagogy
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Overall student workload: - didactic test on the theory of the subject (50 points), and a comparative written paper of at least 5 pages (50 points) Final course grade: - A = 90 - 100% (100 - 90 points) - B = 80-89 % (89-80 points) - C = 70-79 % (79-70 points) - D = 60 - 69 % (69 - 60 points) - E = 50 - 59 % (59 - 50 points) - FX = 0 - 49 % (49 - 0 points) Total student workload - distribution of work hours: 1 credit = 30 work hours: - Class attendance: total for the semester (13 hours). - Work related to the student's written work and its elaboration (17 working hours).	
Results of education: Knowledge: Upon completion of the course, the student will know - the basic concepts, methods and didactic means of comparative pedagogy and international education - the most important methods and results of comparative pedagogy in its historical scope - the connection between different cultures and education - the economic, political, social and historical contexts of education - the educational practice of the Member States of the European Union - the link between globalisation and education - the challenges of education in developing countries - conclusions drawn from major international surveys - the educational practice of major international schools Skills: The student is able to - study, analyze literature sources of comparative pedagogy and international education, expertly select methods and aspects of analysis	

- formulate conclusions after studying comparative pedagogy
- apply their own experience in practice
Competencies:
The student should be
- be open to learning about the education of other historical periods, cultures, states
- be open to critically evaluate new educational experiences and to try them out
- be independent in his/her knowledge of the educational practice of other countries, cultures, historical periods
- analyses educational practice responsibly in the light of economic, social and demographic changes

Brief syllabus:
Basic concepts, methods of comparative pedagogy
Methods and results of historical comparative pedagogy
Culture and education in the past and present
Economic and political dimensions of comparative pedagogy
Social and historical dimensions of comparative pedagogy
Globalisation and education
Education in the European context
Educational practice in developing countries
Experiences from large international surveys
Key concepts, methods of international education
Multicultural education
International schools in the world

Literature:
Összehasonlító pedagógia: A nevelés és oktatás nemzetközi perspektívái / Bábosik István, Kárpáti Andrea. - 1. vyd. - Budapest: BIP, 2002. - 345 s. - ISBN 963 86244 2 6.
Összehasonlító pedagógia / Henk van Daele. - Debrecen: Kossuth Egyetemi Kiadó, 2001. - 100 s. - ISBN 9634725732.
Comparative and International Education: An Introduction to Theory, Method, and Practice / David Phillips, Michele Schweisfurth. - 2. vyd. - London: Bloomsbury, 2014. - 222 s. - ISBN 978-1-4411-2242-1.
Neveléstörténet / Pukánszky Béla, Németh András. - 1. vyd. - Budapest: Nemzeti Tankönyvkiadó, 1994. - 584 s. - ISBN 963 18 5716 6.
Két évszázad gyermekei: A tizenkilencedik-huszadik század gyermekkorának története / Pukánszky Béla. - 1. vyd. - Budapest: Eötvös József Könyvkiadó, 2003. - 308 s. - ISBN 963 9316 65

Language, knowledge of which is necessary to complete a course:
hungarian , slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 112

A	B	C	D	E	FX
90.18	7.14	1.79	0.0	0.89	0.0

Teacher: prof. Péter Tóth, PhD., Dr. habil. Aranka Híves-Varga, PhD., prof. Krisztián Józsa, DSc., Dr. habil. Erika Kopp, PhD.,

Date of last update: 28.03.2025
Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ PPA/25	**Name:** Pedagogical and psychological aspects of educational process
Types, range and methods of educational activities: **Form of study:** Lecture / Seminar **Recommended extent of course (in hours):** **Per week:** 1 / 1 **For the study period:** 13 / 13 **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 2.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Successful completion of the course requires active participation in lectures and seminars and successful completion of written and oral examinations. The final grade consists of the points obtained for fulfilling the requirements in the form of: max. 10 points for participation, max. 40 points for the written exam and max. 50 points for the oral exam. A student may obtain a maximum of 100 points in total. The final grade for the course is: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. A grade of FX is awarded if the student achieves less than 50% of the total points. Total student load: 3 credits = 90 hours (26 hours: attendance at lectures and seminars, 64 hours: self-study and preparation for written and oral examinations).	
Results of education: Knowledge: - Can identify the developmental and individual characteristics of the learner. - Can identify the psychological and social determinants of pupil learning. - Knows and can characterize the biological, psychological, and sociological aspects of development in young school-age children. - Knows and understands the concept of the institutional socialisation process in a broader social scientific context. - Knows and understands pupils' learning styles, methods of diagnosing them and the factors that influence them. - Knows the typology, classification and types of learning styles. - Understands the process of motivation, the system of motives and the specifics of motivation in the educational process. - Knows and can identify methods and tools for identifying factors of student learning. - Understands the differences of pupils without prejudices and stereotypes and identify them in the content and process of education. - Has knowledge and skills in his/her field, including interdisciplinary links and reflection on the development of relevant disciplines. - He/she is familiar with the basic concepts of educational (teaching, learning, motivation, learner personality, teacher personality, learning techniques and strategies) and social psychology (social learning, social environment, social influence, small and large social groups, socialisation).	

- The student is able to implement the acquired knowledge and insights in the educational process.
- Can define the main phenomena of the educational process from the perspective of educational psychology and the main phenomena occurring in the context of interpersonal relationships from the perspective of social psychology.
Skills:
- Has basic practical experience in identifying the individual characteristics of school-age and adolescent pupils.
- Has basic practical experience in identifying the psychological and social determinants of pupil learning.
- Basic practical experience in identifying the special educational needs of pupils in a socio-cultural context.
- Can accept the diversity of pupils in a socio-cultural context.
- Can identify the learning style and individual educational needs of pupils (intact pupils, pupils with special needs) and specific developmental learning disabilities.
- Understands the different ways in which pupils learn depending on psychological, physical and social conditions.
- Can work independently with social psychology literature and will be able to collect and evaluate professional information.
- Is able to apply the acquired theoretical knowledge in pedagogical practice.
- The student will be able to recognise and evaluate phenomena of educational and social psychology in pedagogical practice.
- The student will be able to analyse and evaluate situations occurring in pedagogical practice from the point of view of educational and social psychology.
- Can recognise the level of own competence.
Competences:
- Establishes correct attitudes towards the concepts and phenomena of educational and social psychology.
- Correctly identifies his/her own profession.
- Solves educational problems professionally and empathetically.
- Shapes the learning environment in such a way as to positively influence the learning process.
- Accepts psychological regularities in the educational process.
- Adopts strategies and measures to protect pupils' mental and social health.
- The graduate is characterised by creative thinking, independence in planning his/her own education, autonomy and responsibility in decision-making in relation to the issues of the field of study Teaching for Primary Education.

Brief syllabus:
The subject and system of educational psychology.
Basic concepts of educational psychology: teaching, learning, lifelong learning, formal, non-formal and informal learning, learning, memory, thought operations, motivation, motivation to learn, skills, abilities, skills.
Students personality in the context of educational and school psychology.
Performance characteristics of the pupil's personality.
Teacher's personality in the context of educational and school psychology.
Social learning, the process of socialization.
Subject and system of social psychology, basic concepts of social psychology: group, socialization, social environment, communication
Social psychological characteristics of personality
Social groups. A pupil from a socially disadvantaged background.

Attitudes, stereotypes, prejudices and their changes
Socialisation and personalisation at school
Methods of understanding social relations in the classroom, school
Social influence, leadership and power

Literature:

PUKÁNSZKY Béla : Iskola és pedagógusképzés : Budapest : Gondolat Kiadó, 2014. - 182 s. - ISBN 978-963-693-544-3.
GARAI, Imre, NÉMETH András : Changes in and challenges of the secondary teacher training system in Budapest during the Great War and the period immediately following it. History of Education & Children's Literature. Vol. 14, no. 1 (2019), p. 449-464. ISSN 1971-1093. CCC, WoS, SCOPUS.
NÉMETH András : Magyar pedagógusképzés és pedagógus szakmai tudásformák I. 1775-1945: Nemzeti fejlődési trendek, nemzetközi recepciós hatások : Budapest: ELTE - Eötvös Kiadó, 2012. 112 s. ISBN 978-963-312-0934.
TÓTH-BAKOS, Anita : Výsledky analýzy hodnotenia vybraných webových aplikácií : In: Inovácie v pregraduálnej príprave učiteľov s využitím webových aplikácií / Szarka Katarína. - 1. vyd. - Komárom : KOMPRESS Nyomdaipari Kft., 2018. - ISBN 978-615-00-2597-1, S. 33-50
HORVÁTHOVÁ Kinga, NÉMETH András, STRÉDL Terézia, SZABÓOVÁ Edita, TÓTH-BAKOS Anita : Szlovák-magyar pedagógiai terminológiai kézikönyv = Slovensko-maďarská pedagogická terminologická príručka : Komárno : Univerzita J. Selyeho, 2015. - 132 s. - ISBN 978-80-8122-160-6
ĎURIČ, Ladislav, S. HOTÁR, Viliem, PASTIER, Jozef: Pedagogická psychológia : Terminologický a výkladový slovník - Bratislava : SPN. - 464 s. - ISBN 80-08-02498-4.
Štefan VENDEL : Pedagogická psychológia - Bratislava : Epos, 2007. - 447 s. - ISBN 978-80-8057-710-0.
HVOZDÍK, Stanislav a kol. : Vybrané kapitoly zo školskej psychológie I. - Prešov : FF PU, Katedra psychológie, 1999. - 402 s. - ISBN 80-88922-03-8.
BALOGH Katalin : Pedagógiai pszichológia - Budapest : Nemzeti Tankönyvkiadó, 2003. - 143 s.
ARONSON Elliot: A társas lény. 1. vyd. Budapest : Akadémiai Kiadó, 2011. 504 s. ISBN 978963 05 86283
KELEMEN László : Pedagógiai pszichológia - Budapest : Tankönyvkiadó, 1988. - 694 s. - ISBN 9631808521.
ARONSON Elliot: Columbine után : Az iskolai erőszak szociálpszichológiája. 1.vyd. Budapest : Ab Ovo Kiadó. 2009. 191 s. ISBN 978-963-9378-72-8.
BOROŠ Július: Základy sociálnej psychológie : pre študujúcich humánne, sociálne a ekonomické vedy 1. vyd. : IRIS,2001. 227 s. ISBN 8089018203
CSEPELI György: A meghatározatlan állat : Szociálpszichológia kezdőknek és haladóknak. 1. vyd. Budapest : Jószöveg Műhely Kiadó, 2005. 324 s. ISBN963 7052 25 9
CSEPELI György: A szociálpszichológia vázlata. Budapest : Jószöveg Műhely Könyvkiadó. 2001.160 s. ISBN 963 048 678 4
GOLEMAN, Daniel: Társas intelligencia = Az emberikapcsolatok új tudománya. 3. vyd. Budapest. 506 s. ISBN 9789633100349
SCHMERCZ István. Pedagógiai szociálpszichológia - Nyíregyháza : Élmény 94 Bt., 2002. - 232 s. - ISBN 963853334x.
CSEPELI György. Szociálpszichológia - Budapest : Osiris Kiadó, 2003. - 572 s. - ISBN 963 379 563 X.
LENGYEL Zsuzsanna. Szociálpszichológia : szöveggyűjtemény - Budapest : Osiris, 2002. - 534 s. - ISBN 963 379 183 9.

Eliot R. SMITH, Diane M. MACKIE, Heather M. CLAYPOOL. Szociálpszichológia - Budapest : ELTE Eötvös Kiadó, 2016. - 873 s. - ISBN 978 963 312 251 8.

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 146

A	B	C	D	E	FX
82.88	11.64	3.42	0.0	1.37	0.68

Teacher: PaedDr. Terézia Strédl, PhD., Mgr. Anita Tóth-Bakos, PhD., PaedDr. Alexandra Nagyová, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ PPU/25	**Name:** Supportive learning environment
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Overall student workload: - didactic test on the theory of the subject (50 points), where it is necessary to obtain at least 50% of the possible points - use an arbitrary questionnaire to investigate the cognitive or learning style of a group of students/students (minimum 15 persons), evaluate, assign learning methods, summarise the results and conclusions in a written paper of at least 4 pages (50 points) Final course grade: - A = 90 - 100% (100 - 90 points) - B = 80 - 89 % (89 - 80 points) - C = 70-79% (79-70 points) - D = 60 - 69 % (69 - 60 points) - E = 50 - 59 % (59 - 50 points) - FX = 0 - 49 % (49 - 0 points Total student workload: 2 credit = 60 hours (13 hours of lecture attendance; 47 hours of independent study and preparation of written work)	
Results of education: Knowledge: Upon completion of the course, the student will know - Concepts and theories related to cognitive functions and their disorders and metacognition - concepts and theories related to self-regulated learning - the personality foundations of learning styles - the most important learning styles, their neurological bases - the connection between learning style, learning environment and learning motivation - the most important concepts of learning methodology Skills: The student is able to - evaluate, on the basis of questionnaires, the cognitive and learning styles of others and his/her own - based on the results, to recommend a method of learning to others Competencies:	

The student should be
- be committed to learning methods that take into account the peculiarities of students' cognitive and learning styles
- be open to analyze different learning problems professionally, using theories of cognitive and learning styles, formulate conclusions and solve problems
- be responsible when learning difficulties and individual pupil characteristics are encountered
- can independently plan learning environments that take into account the unique learning styles of learners

Brief syllabus:
Cognitive functions and their development
Cognitive disorders and their neurological basis
The first theories of metacognition
Metacognition, metacognitive strategies and styles
Self-regulatory learning
Object relations of self-regulatory learning
Learning: ability and style
Foundations of learning style based on theories of personality
Neurological bases of learning style, hemispheric laterality
Learning style and learning-supportive environment, Internet-based learning
Learning and emotions, motivation for learning
Learning methodology
Linking teaching style and learning style

Literature:
Egyéni különbségek szerepe a tanulásban : Tanulási stratégiák / Tóth Péter. - 1. vyd. - Budapest : DSGI, 2012. - 143 s. - ISBN 978-963-88946-7-0.
Egyéni különbségek szerepe a tanulásban : A tanulási stílus / Tóth Péter. - 1. vyd. - Budapest : DSGI, 2011. - 222 s. - ISBN 978-963-88946-5-6.
A hatékony tanulás titka: A hatékony tanítás és tanulás dinamikája / Paul Roeders, Gefferth Éva. - 1. vyd. : Trefort Kiadó, 2007. - 215 s. - ISBN 978-963-446-453-2.
Engage: The Trainer´s Guide to Learning Styles / Jeanine O´Neill-Blackwell. - 1. vyd. - San Francisco: Pfeiffer, 2012. - 357 s. - ISBN 978-1-118-02943-5.
Tanulás és motiváció / Barkóczy Ilona, Putnoky Jenő. - Budapest : Tankönyvkiadó, 1967. - 282 s. - ISBN 0008081.
A tanulás tanítása: Péter Oroszlány. - Budapest : Független Pedagógiai Intézet, 2004. - 326 s. - ISBN 9632100972.
Hogyan tanítsuk gyermekeinket tanulni? / Robert Fisher. - 1. vyd. - Budapest : Műszaki Kiadó, 2007. - 192 s. - ISBN 978-963-16-2531-8.

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 71

A	B	C	D	E	FX
70.42	22.54	7.04	0.0	0.0	0.0

Teacher: prof. Péter Tóth, PhD., Dr. habil. Aranka Híves-Varga, PhD., Dr. habil. Erika Kopp, PhD.,

Date of last update: 28.03.2025
Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ PSO/25	**Name:** Psychology of personality
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The condition for successful completion of the course is active participation in lectures, as well as successful completion of written examinations. The resulting evaluation consists of points obtained for fulfilling the conditions in the form of: max. 30 points for presence, max. 70 points for exam. The student can get a maximum of 100 points. Final assessment of the subject: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. The FX rating is awarded if the student achieves less than 50% of the total number of points. Total student workload: 1 credit = 30 hours (13 hours: attendance at lectures, 17 hours: self-study and exam preparation).	
Results of education: Upon completion of the course, the student will Knowledge: • master the basics of the scientific field of personality psychology, • know how to navigate the basic terminology of the given issue, know different theoretical directions and practical outcomes in practice, • understand different concepts and definitions of the term personality, • acquire professional knowledge, acquires developmental criteria, personality characteristics and psychological guidelines for participants in public education, • transform theory into practice, become familiar with progressive trends in the field of personality psychology, • become familiar with methodological approaches, structure and aspects of job descriptions. Skills: • be able to independently evaluate the child's personality assumptions in the educational process, • compile psychological criteria according to physical and mental age, • knows how to navigate various personality theories, • knows and is able to differentiate personality determinants, • research and formulate the theoretical and practical approaches necessary to solve the problems encountered, • be able to cooperate and consult with other experts, work in a team. Competences: • take into account the determinants and characteristics of personality in his pedagogical practice,	

• differentiate the personality assumptions, character, characteristics and temperament of the students during working with students,
• react adequately and differentiates the individual personality traits of pupils in his pedagogical practice,
• applie a humanistic and person-oriented approach in his pedagogical practice,
• react flexibly and well-founded to problems, acts democratically and acts tolerantly,
• applie the principles of inclusive index, optimal working climate, cooperative methodology,
• implement targeted development of self-knowledge, participate in further education
• independently plan activities that expand knowledge about social services, creates an atmosphere of trustworthiness, helpful, encouraging, attentive, accepting behavior towards students.

Brief syllabus:

Characterization and definition of the term personality, personality traits.
Psychological, social and biological determinants of human personality.
The mutual influence of heredity and environment.
Continuity and discontinuity of personality.
Intelligence and creativity in relation to personality and from the perspective of personality psychology.
Basics of personality psychology - basic terms (character, temperament, properties, features, abilities, skills, givens, predispositions).
Personality theories - behavioral, integrated, humanistic theories and their representatives - Adler, Hippocrates, Pavlov, Jung, Eysenck, Spranger, Big Fave.
Personality structure.
Gardner's theory of abilities and its importance for education.
Rogers' theory of person-oriented approach.
The latest trends in personality psychology and their impact on the educational process.
Salovey's theory of emotional intelligence - its development in the educational environment.

Literature:

ATKINSON, R. 2000. Pszichológia. (Psychológia). Budapest : Osiris Kiadó. 2000.
BAKOS, A. 2011. Spoločnosť Williamsovho syndrómu na Slovensku – význam ich 20-ročnej činnosti v domácom a európskom kontexte. In: Ars Sonans 3 – Osobnosť a inštitúcia – Symbióza dvoch fenoménov hudobnej kultúry Slovenska. Nitra : KH PF UKF. 2011. ISBN 978-80-8094-999-0
BUDA, B. 1994. Mentálhigiéné. Tanulmánygyűjtemény. (Duševná hygiena. Zborník štúdií). Budapest : Animula. 1994.
CARVEL, Ch.S. - SHEIER, M.F. 2006. Személyiséglélektan. Budapest: Osiris Kiadó. ISBN 9789633897096
GOLEMAN, D. 2019. Érzelmi intelligencia. Budapest: Háttér Kiadó. EAN 9786155124617
GAJDOŠOVÁ, E. 1995. Školská psychológia. Bratislava : SPN. 1995. ISBN 8007010297
STRÉDL, T. 2017. Terápiák és nevelés. A terápia szocializációs hatása a nevelésben. Komárno: UJS. 87p. ISBN ISBN 9788081222276
STRÉDL, T. 2013. A szociális kompetencia professzionális dimenziói. (Profesionálne dimenzie sociálnej kompetencie). In Új kihívások a tudományban és az oktatásban. Nové výzvy vo vede a vo vzdelávaní. Medzinárodná vedecká konferencia Univerzity J. Selyeho v Komárne. Komárno : UJS. 2013. ISBN 978-80-8122-073-9
VAJDA, ZS., KÓSA, É. 2005. Neveléslélektan. (Psychológia výchovy). Budapest : Osiris Kiadó. 2005.

Language, knowledge of which is necessary to complete a course:

hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 5

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

Teacher: PaedDr. Terézia Strédl, PhD., Mgr. Anita Tóth-Bakos, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ STZ/25	**Name:** Professional training
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week: For the study period:** 20s **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 2., 4.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The conditions of professional training are set and regulated by the current Directive of the Dean of the Faculty of Education of the University of J Selye: Principles of pedagogical practice at the Faculty of Education of the University of J Selye. The student is obliged to follow the relevant part of this document related to the professional training (STZ). The requirements for taking the course are as follows: - active participation of the student in the professional training in the scope of 20 hours in accordance with the directive, - submission of a completed and certified protocol of professional training, - submission of a portfolio from the professional training, consisting of completed observation sheets, analyses and evaluation of the student (max. 50 points). Total student workload: 1 credit = 30 hours - 20 hours participation in the internship (contact hours); 10 hours analysis and preparation of the portfolio. Prerequisite for successful completion of the course: 1.) submission of a completed and certified School Internship Completion Report, 2.) obtaining at least 50% of the maximum course grade (50 points). Overall course pass mark: - Pass = 50 - 100% (25 - 50 points) - Fail = 49 - 0% (0 - 24 points)	
Results of education: Learning Outcome: Professional training is a stay of students in a school and in a school educational institution such as a school children's club, leisure centre, school boarding school, in order to participate not only in the educational process, but also in the day-to-day work of teachers and educators. Knowledge: - The student possesses basic theoretical knowledge in the field of education and training in schools and school educational institutions, - the student is familiar with the educational activities of teachers in schools and educators in school educational establishments,	

- the student is familiar with other work activities of teachers in schools and educators in school educational establishments,
- the student knows the course and sequence of the work activities of school teachers and school educators which do not relate to direct educational activities,
- the student knows the duties of teachers and educators depending on the educational environment - trip, excursion, children's camp, staying outdoors, etc,
- the student knows the possibilities and strategies of cooperation with other educators, teachers, supervisors, non-teaching staff, parents and other institutions.
Skills:
- The student is able to implement educational activities related to the work of teachers in schools and educators in educational settings,
- the student is able to carry out other work activities of teachers and educators in school educational establishments which are not related to direct educational activities,
- the student is able to cooperate with other educators, teachers, supervisors, non-teaching staff, parents and other institutions,
- the student can plan, implement, analyse and evaluate the course of educational activities.
Competences:
- The student is able to imply his/her own knowledge and experience into the independent implementation of educational activities in schools and educational institutions,
- the student is able to independently carry out other work activities related to the work of a teacher and educator, which are not related to direct educational activities,
- the student is able to conceive his/her own working procedures for effective observation, recording, analysis and evaluation of the course of educational and interest activities and other activities.

Brief syllabus:

Within the professional training of 20 hours, the student, in addition to the educational process, will be involved in activities such as administrative tasks, working with parents, participating in meetings, planning and implementation of interest activities, extracurricular activities, interest groups, preparing students for competitions, organizing competitions, organizing exhibitions, preparing projects, preparing teaching materials for work with an interactive whiteboard or smartphone, working with children in nature, participating in excursions. During the professional training, the student has the opportunity to teach more consecutive lessons, or to carry out interest activities and other activities, which will improve the quality of practical preparation for the teaching profession.
Ethical principles of professional training.
Organisational requirements of the professional training.
Material, technical, hygiene and safety requirements of the professional training.
Planning and designing the work, preparation for the activity.
Pedagogical reflection. Evaluation. Self-evaluation.
Pedagogical documentation.

Literature:

CINDLEROVÁ, I,- CSEHIOVÁ, A. et al. 2021. Mentor Training: Materials and Tasks. 1. vyd. Ostrava: Ostravská univerzita, 268 s. ISBN 978-80-7599-294-9.
FRÝDKOVÁ, Eva. Metódy a formy spolupráce rodiny a školy. In Manažment školy v praxi: odborný mesačník pre manažment škôl, školských a predškolských zariadení. Bratislava: IURA EDITION, 2010, (12), 21-27. ISSN 1336-9849. [online]. Dostupné na internete: https://sekarl.euba.sk/arl-eu/sk/detail-eu_un_cat-0124951-Metody-a-formy-spoluprace-rodiny-a-skoly/

FÜLE, S. 2004. Napközi otthoni neveléstan. Budapesť : OKKER Kft, 2004. 147 s. ISBN 963-9228-85-0.
ORSOVICS, Y. a kol. 2018. A személyiségfejlesztés új kihívásai a nemzetiségi óvodákban és iskolákban. Komárno : UJS, 2018. 161 s. ISBN 978-80-8122-282-5.
SIROTOVÁ, M. 2015. Pedagogická prax v pregraduálnej príprave učiteľov. Trnava : UCM, 2015. 127 s. ISBN 978-80-8105-648-2.
Vyhláška Ministerstva školstva, vedy, výskumu a športu Slovenskej republiky č. 22/2022 Z. z. o školských výchovno-vzdelávacích zariadeniach. [online]. Dostupné na internete: <https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2022/22/>.
Vyhláška Ministerstva školstva, vedy, výskumu a športu Slovenskej republiky č. 21/2022 Z. z. o pedagogickej dokumentácia a ďalšej dokumentácii. [online]. Dostupné na internete: https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2022/21/
Zákon č. 245/2008 z 22. mája 2008 o výchove a vzdelávaní (školský zákon) a o zmene a doplnení niektorých zákonov.
Ostatné dokumenty:
Aktuálna Smernica Dekana PF UJS: Zásady realizácie pedagogickej praxe na Pedagogickej fakulte Univerzity J Selyeho.
Pedagogická dokumentácia a ostatná dokumentácia školy alebo zariadenia

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 41

a	n
87.8	12.2

Teacher: PaedDr. Alexandra Nagyová, PhD., PaedDr. Tamás Török, PhD., PaedDr. Beáta Kiss, PhD., Mgr. Katalin Sýkora Hernády, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ TEE/25	**Name:** Theory and methodology of ecology and environmental studies
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 4.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The condition for passing the subject is active participation in the lecture, and at the end of the semester, we will summarize the new knowledge using a written test. Final grade of the subject: A – 100-90%, B – 89-80%, C – 79-70%, D – 69-60%, E – 59-50%. Achieving 50% of the total points is necessary to award credits. Total student load: 1 credit = 30 hours (13 hours: participation in lectures, 17 hours: self-study and preparation for the exam).	
Results of education: The aim of the subject is for the student to acquire knowledge about ecology and environmental studies, with the help of which he can learn about natural systems and their interactions, to create environmentally conscious behaviour, and create a sustainable lifestyle. Knowledge: - The student knows ecological processes and interactions in the system and consciously organizes ecologically relevant pedagogical processes. - The student has an overview of the relationship between man and nature and man's position in nature. - The student knows the main phases of the transformational action of the human environment and understands their natural, social and economic consequences. - The student knows the main principles of sustainability, the principles of sustainability education, and the possibilities of developing children's environmental culture. Abilities: - The student can get to know natural systems more and more perfectly, develop ecological thinking, and collect and process independent information to identify ecological problems. - The student can convey a sustainable way of life. - The student can establish and develop relationships with various institutions and effectively collaborate to make sustainability a reality. - The student can develop and implement a sustainability program in his/her institutional environment. Competencies: - The student can create a positive relationship with the ecological phenomena of the environment.	

- The student can engage in an emotional, ethical approach and positive culture formation in his own life and the lives of the people around him.
- The student is open to possible collaborations, participatory programs, new theories and methods, and their application and integration in the field of sustainability.
- As an active citizen, the student is active in pedagogical areas of education within his competencies; he takes responsibility for the ecological formation of his environment, living space, and community.
- The student demonstrates a responsible approach to building ecological awareness and the environmental culture of the people around him and developing the necessary competencies.

Brief syllabus:

Subject, factors, and concept of ecology. Ecological systems. The concept of ecosystems.
Earth as a unified system. Criteria and main types of systems. Properties of environmental systems. Cyclic and linear systems. Ecological balance. Abiotic environmental factors (sunlight, temperature, water, soil, air) impact living organisms.
Biotic environmental factors and their impact on living organisms. Populations. Their group characteristics and interactions between populations.
Properties of biocenoses. The flow of substances and energy in biocenoses. Food chains, food networks. Biological production and use of energy. Biomass.
The origin and development of the biosphere concerning terrestrial conditions. Biogeochemical cycle of elements.
Basic concepts and contexts of environmental protection.
The concept of sustainable development. Environmental, social and economic aspects of sustainability.
The history of humankind in the light of its impact on the planet/biosphere is a description of changes in man's mentality toward the environment.
Problems of the Anthropocene age, the main environmental-social-economic megatrends in the world and Central Europe.
Human reactions and reactions to problems from the global level to the individual level. Possible solutions and best practices for social participation. Elements of the circular economy.
Pedagogy of sustainability, principles that must be followed when forming a relationship with the environment, rules for creating, preserving, and further developing a cultured environment.

Literature:

DARVAY, S., NEMCSÓK, J., FERENCZY, Á.: Fenntartható fejlődés. Polgári szemle: Gazdasági és társadalmi folyóirat, 2016 - 12 (4-6). pp. 88-104. ISSN 1786-6553 https://polgariszemle.hu/images/content/pdf/psz_2016._4-6.szam_7.pdf
HAAS, M., ONDROVÁ, E., ŠVAJDA, J.: Environmentálna výchova/Environmental education. Vydavateľstvo: Ústav vysokohorskej biológie Žilinskej univerzity, 2008, 135 strán
KERÉNYI, A.: Európa természet és környezetvédelme. Nemzeti Tankönyvkiadó, Budapest, 2003
KOVÁTS-NÉMETH, M.: Az erdőpedagógiától a környezetpedagógiáig. Comenius Kft, Pécs, 2010, ISBN 978-963-9687-18-9
KOVÁTS-NÉMETS, M.: Fenntarthatóság, pedagógia, kutatás. - 1. vyd. - Győr : NyugatMagyarországi Egyetem Apáczai Csere János Kar, 2007. - 227 s. - ISBN 978-963-9364-85-1
KRISKA, Gy., Maklári Jenőné, Scheuer, Zs.: Gyertek velünk erdei iskolába! Farkaserdei erdei iskola projekt /. - 1. vyd. : Flaccus Kiadó, 2002. - 186 s. - ISBN 963 94 12 07 4.
LÜKŐ, I.: Környezetpedagógia. - Budapest : Nemzeti Tankönyvkiadó, 2003. - 252 s. - ISBN 9631933768.

Language, knowledge of which is necessary to complete a course:

hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 78

A	B	C	D	E	FX
88.46	1.28	6.41	1.28	0.0	2.56

Teacher: Ing. Pavol Balázs, PhD., Dr. habil. Sarolta Zsuzsanna Mészárosné Darvay, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ UIP/25	**Name:** Applying an interdisciplinary approach in regional education
Types, range and methods of educational activities: **Form of study:** Seminar **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 1	
Recommended semester/trimester of study: 4.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The condition for successful completion of the course is active participation in seminars, as well as handing in ongoing assignments during the semester. The resulting evaluation consists of points obtained for fulfilling the conditions in the form of: max. 30 points for presence, max. 70 points for ongoing tasks. The student can get a maximum of 100 points. Final assessment of the subject: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. The FX rating is awarded if the student achieves less than 50% of the total number of points. Total student workload: 1 credits = 30 hours (13 hours: attendance at seminars, 17 hours: self-study and preparation of ongoing assignments during the semester).	
Results of education: Upon completion of the course, the student will Knowledge: • Master basic concepts: interdisciplinary relationships, educational areas, cross-cutting topics, interdisciplinary and intradisciplinary approaches. • Know how to navigate teaching methods, strategies and techniques of appropriate application of an interdisciplinary approach. • Can transform theory into practice. • Know progressive trends in the field of pedagogy, didactics and alternative pedagogy. Skills: • Be able to plan and prepare an activity for pupils in the spirit of an interdisciplinary approach. • Be able to implement activities for students in the spirit of an interdisciplinary approach within the educational process. • Be able to subsequently evaluate and reflect on the completed activity with elements of self-reflection. • Understand his approval subject/s in interdisciplinary contexts, find possibilities of connection with other subjects. • Be able to cooperate and consult with other experts, work in a team. Competences: • Applie in his teaching cross-subject links and an interdisciplinary approach.	

• Focuse inn his pedagogical activities on creating a comprehensive image of students, developing independence and critical thinking.
• Respond flexibly and well-founded to problems, acts democratically, acts tolerantly.
• Applie the principles of inclusive index, optimal working climate, cooperative methodology.
• Implement targeted development of self-knowledge, participate in further education.
• Independently plan activities that expand knowledge about social services, can create an atmosphere of trustworthiness, helpful, encouraging, attentive, accepting behavior towards students.

Brief syllabus:
An inter-subject and supra-subject approach to designing the content of education according to content-based educational areas and their corresponding subjects.
Intersubject relationships and cross-cutting topics as means of shaping and creating a comprehensive image of students, systematizing knowledge and knowledge and further creating a comprehensive picture of reality
School documents, state educational programs, educational areas from an interdisciplinary and intradisciplinary perspective.
Framework curriculum and cross-cutting topics.
Methodology and didactics of interdisciplinary approach.
Methods, strategies, techniques, and forms of work with students supporting an interdisciplinary approach and cross-subject relationships.
Possibilities of applying an interdisciplinary approach in the educational process
Intersubject relationships and cross-cutting topics.
Planning, preparation, implementation and subsequent evaluation of educational activities in the spirit of an interdisciplinary approach.
Inclusion of activities and methods of an interdisciplinary nature in the educational process, specifically within the lesson.
Modern approaches, progressive and alternative directions and concepts in pedagogy supporting interdisciplinarity.

Literature:
Štátny vzdelávací program pre 2. stupeň základnej školy v Slovenskej republike ISCED 2 pre nižšie sekundárne vzdelávanie, dostupné: https://www.statpedu.sk/files/articles/dokumenty/statny-vzdelavaci-program/isced2_spu_uprava.pdf
Štátny vzdelávací program pre gymnázia úplné stredné všeobecné vzdelávanie, dostupné: https://www.statpedu.sk/files/articles/dokumenty/inovovany-statny-vzdelavaci-program/statny_vzdel_program_pre_gymnazia.pdf

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 46

A	B	C	D	E	FX
69.57	19.57	8.7	0.0	2.17	0.0

Teacher: Mgr. Anita Tóth-Bakos, PhD., Dr. habil. Erika Kopp, PhD., PaedDr. Alexandra Nagyová, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ VKZ/25	**Name:** Education for health
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study: 4.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: General conditions for passing the course: active participation of the student in lectures - participation of the student in the assignments and participation in the analysis and discussions during the lectures - proposal of an educational activity project with the aim of developing the student's health and human-ecological competences (50 points) - a test on the theoretical part of the course (50 points). Criteria for evaluation of the educational activity project proposal: - content (20 points) - originality (10 points) - formality (10 points) - presentation of the literature review (10 points) Total student workload: 2 credit = 60 hours - 13 hours participation in lectures (contact hours); 47 hours independent study, preparation of term papers and assignments assigned in class. The prerequisite for successful completion of the course is obtaining at least 50% of the maximum course grade. Overall course pass mark: - A = 90 - 100% (90 - 100 points) - B = 80-89% (80-89 points) - C = 70 - 79% (70 - 79 points) - D = 60 - 69% (60 - 69 points) - E = 50 - 59% (50 - 59 points) - FX = 0 - 49% (0 - 49 points)	
Results of education: Knowledge: - The student will be able to explain basic concepts in health education for school-age students. - The student will be familiar with school hygiene, ergonomics and proper human lifestyle and other areas listed in the course syllabus. Skills: - The student will be able to identify environmental risk factors that threaten health	

- The student will be able to identify and analyze current issues in maintaining the health of children in the school environment.
- The student will be able to independently search, compare and work with relevant literature sources.
Competencies:
- The student will be able to design an educational activity project to develop the student's health and human-ecological competencies.
- The student will be able to design various didactic activities and games to develop the health and human-ecological competences of the pupil.

Brief syllabus:
Daily regimen of school-age pupils, identification and elimination of possible health risks in the school environment, pupil workload, civilization diseases, correct composition of the menu, basic foods and their composition, drinking regime, prevention of common diseases, basics of ergonomics, biorhythms and daily regimen, human ecology, indoor and outdoor school environment, hygiene of the school environment. Health education in schools.

Literature:
ÁDÁNY RÓZA. Megelőző orvostan és népegészségtan - 1. vyd. - Budapest : Medicina, 2006. - 678 s. - ISBN 963 226 070 8.
ASZMANN ANNA. Fiatalok egészségi állapota és egészségmagatartása Országos Tisztifőorvosi Hivatal. - 65 s. - ISBN 9630052466.
ASZMANN ANNA, ERDÉLYI ISTVÁN, MATEJKA ZSUZSANNA. Tények könyve MEDICINA - 1. vyd. - Budapest : Greger-Delacroix Kiadó, 1998. - 416s. - ISSN 1418-5253.
DÉSI ILLÉS. Népegészségtan - 1. vyd. - Budapest : Semmelweis Kiadó, 2001. - 583 s. - ISBN 963 9214 20 5.
FOSTER RUSSEL, KREITZMAN LEON. Rhythms of Life : The Biological Clocks that Control the Daily Lives of Every Living Thing - London : Profile Books, 2005. - 278 s. - ISBN 1 86197 571 6.
GÁBORNÉ SÁRVÁRI. Egészségvédelem - Budapest : Nemzeti Tankönyvkiadó, 2000. - 106 s. - ISBN 9631950980.
MACHOVÁ JITKA, KUBÁTOVÁ DAGMAR a kol. Výchova ke zdraví - 2. akt. vyd. - Praha : Grada, 2015. - 312 s. - ISBN 978-80-247-5351-5.
MÁLEK BOHUSLAV a kol. Hygiena práce - 1. vyd. - Praha : Sobotáles, 2014. - 279 s. - ISBN 978-80-86817-46-0.
NAGY MELINDA. Humánökológia - 1. vyd. - Komárno : Univerzita J. Selyeho, 2012. - 188 s. - ISBN 978-80-8122-056-2.
NAGY MELINDA. Humánbiológia - 1. vyd. - Dunaszerdahely : Lilium Aurum, 2006. - 250 s. - ISBN 80-8062-283-3.
NÁNÁSI IRÉN. Humánökológia : A természetvédelem, a környezetvédelem és az embervédelem tudományos alapjai és módszerei - 1. vyd. - Budapest : Medicina, 1999. - 514 s. - ISBN 963 242 088 8.
UNGVÁRY GYÖRGY. Munkaegészségtan - Budapest : Medicina Könyvkiadó, 2004. - 985. - ISBN 9632429273.
VIDA GÁBOR. Humánökológia - 1. vyd. - Budapest : ELTE Eötvös Kiadó, 1996. - 65 s. - ISBN 963-462-858-3.
VÍZVÁRI LÁSZLÓ. Egészségtan - 3. vyd. - Budapest : Műszaki Könyvkiadó, 2003. - 167 s. - ISBN 963 16 1886 2.

Language, knowledge of which is necessary to complete a course:
hungarian ,slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 115

A	B	C	D	E	FX
92.17	3.48	2.61	0.0	0.0	1.74

Teacher: Dr. habil. PaedDr. Melinda Nagy, PhD., Dr. habil. Sarolta Zsuzsanna Mészárosné Darvay, PhD., Ing. Pavol Balázs, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ VPU/25	**Name:** Learning disabilities
Types, range and methods of educational activities: **Form of study:** Lecture **Recommended extent of course (in hours):** **Per week:** 1 **For the study period:** 13 **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Successful completion of the course requires active participation in lectures, submission of interim assignments during the semester and successful completion of a written examination. The final grade consists of the points obtained for fulfilling the requirements in the form of: max. 10 points for participation, max. 40 points for intermediate assignments and max. 50 points for the review. A student may receive a maximum of 100 points in total. Final course grade: A 100-90%, B 89-80%, C 79-70%, D 69-60%, E 59-50%. A grade of FX is awarded if the student achieves less than 50% of the total points. Total student workload: 2 credits = 60 hours (13 hours: attendance at lectures, 17 hours: preparation of continuous assignments during the semester, 30 hours: self-study and preparation for revision).	
Results of education: After completing the course the student Knowledge: - Can differentiate specific developmental disorders and indications for inclusion. - The student is able to orient himself/herself in the basic terminology of the subject, knows different theoretical directions, stimulation programs, basics of correction. - Acquire professional knowledge, learn pedagogical guidelines for the school population. - Know how to transform theory into practice, apply the social function and importance of education of pupils with SEN, become familiar with progressive trends in the field of pedagogy and psychology. - Become familiar with methodological approaches, structure and aspects of job descriptions. Skills: - Is able to draw up an individual education plan for pupils and to gestate, if he/she will be a class teacher, to draw up an individual education programme and to apply the principles of differentiation. - Able to navigate incentive programs, obtain an overview of the literature. - Is able to demonstrate and apply techniques of correction, relaxation, stimulation. - Is able to plan a consultation process for an individual or a group, recognising the level of own competences,	

- research and formulate the theoretical and practical background necessary to solve the problems encountered,
- Able to collaborate and consult with other professionals, work in a team
Competencies:
- Responds flexibly and knowledgeably to problems, speaks democratically, acts tolerantly.
- Applies the principles of an inclusive school, optimal working climate, cooperative methodology.
- Implements targeted development of self-knowledge, participates in further education.
- Independently plans activities that expand knowledge of social services, can create an atmosphere of trustworthiness, helpful, encouraging, attentive, accepting behaviour towards pupils.

Brief syllabus:
Developmental learning disabilities and forms of occurrence
Characteristics of partial performance impairments
Dyslexia, dysgraphia, dysorthography
Dyscalculia, dyspraxia, dyspinxia, dysmusia
ADD, ADHD
Conners Hyperactivity Scale - screening
Methodological guidelines for inclusion and indications, forms of integration
Development of an individual education plan
Classification and assessment of pupils with SEND
Correction, re-education - overview of stimulation programmes
The role of the school special educator, school psychologist, teaching assistant
Cooperation with centres: CPPPaP, CŠPP

Literature:
F. FÖLDI Rita. Hiperaktivitás és tanulási zavarok. 1. vyd. Pécs : Comenius Bt. 2004. 155 s. ISBN 9638643277
PORKOLÁBNÉ Balogh Katalin. Készségfejlesztő eljárások tanulási zavarral küzdő kisiskolásoknak. 3. vyd. Budapest : ELTE, 2005. 45s.
STRÉDL Terézia. Inkluzív pedagógia avagy a gyógypedagógiáról másképp. 1. vyd. Komárno: Univerzita J. Selyeho, 2013. 148 s. ISBN 9788081220890
VAŠEK Štefan: Špeciálno pedagogická diagnostika. 4. vyd. : Sapientia s.r.o, 2004. 168 s. ISBN 8096911201
ZELINKOVÁ Oľga: Poruchy učení : dyslexie, dysgrafie, dysortografie, dyskalkulie, dyspraxie, ADHD. 1. vyd. Praha : Portál, 2009. 263 s. ISBN 9788073675141
www.statpedu.sk.
STRÉDL, T. 2013. Inkluzív pedagógia avagy a gyógypedagógiáról másképp. Komárno : UJS. ISBN
STRÉDL, T. 2016. A tolerancia és a kommunikáció jelentősége az oktatásban : Etika az edukációban - tanulmánykötet = Etika v edukácii - vedecký zborník. - Komárno : Univerzita J. Selyeho, 2016. - ISBN 978-80-8122-196-5, CD-ROM, s. 96-110.

Language, knowledge of which is necessary to complete a course:
hungarian, slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 85

A	B	C	D	E	FX
60.0	14.12	9.41	8.24	3.53	4.71

Teacher: PaedDr. Terézia Strédl, PhD., Mgr. Anita Tóth-Bakos, PhD., Dr. habil. Aranka Híves-Varga, PhD., Dr. habil. Erika Kopp, PhD.,

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KPD/UZ/ŠSM/25	**Name:** School pedagogy
Types, range and methods of educational activities: **Form of study:** **Recommended extent of course (in hours):** **Per week: For the study period:** **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study:	
Level of study: II.	
Prerequisites: KPD/UZ/KKV/25 and KPD/UZ/PPA/25 and KPD/UZ/MKU/25 and KPD/UZ/PHR/25	
Conditions for passing the subject: Conditions for qualifying for the State examination: a) completion of all compulsory courses (12 credits), b) obtaining at least 7 credits from the compulsory elective courses of the program, c) obtaining 3 credits from elective courses, d) obtaining 22 credits in the prescribed composition (to complete the subject of the state examination, the student has get 2 credit). In the oral state examination, the student gives an account of his own pedagogical, psychological and biological knowledge as components of education and training. The state examination takes the form of a colloquium, in which the student's pedagogical knowledge is evaluated by the state final examination committee. The oral exam is evaluated on the basis of the following grading scale: A – 100–90%, B – 90–80%, C – 80–70%, D – 70–60%, E – 60–50%. A student who does not reach 50% does not receive credit.	
Results of education: Knowledge: - the student can explain the biological and social psychological aspects of the personal development of school-aged students, - the student knows and interprets the concept of the institutional socialization process in the wider context of social sciences, - the student knows the topic of multiculturalism in relation to students, - the student knows the methodology of pedagogical research, - the student knows the current state education programs, - the student knows the philosophical and methodological starting points of student evaluation, the forms and types of evaluation and its psycho-didactic aspects, - the student knows the system of career development of teachers and the possibilities of career development, - the student knows the methods of self-education, - the student knows the research methods used in the field of pedagogical practice. Skills:	

- the student is able to navigate in the general legislation, pedagogical documentation, other documentation, and other conceptual and strategic documentation related to teacher work,
- the student is able to define and formulate educational goals in the form of learning requirements,
- the student has basic practical experience in the didactic analysis of the teaching process- in the basic breakdown of the content of the course material (facts, concepts, connections, procedures),
- the student is able to choose the basic and developmental content in accordance with the educational goals and the individual needs of the students,
- the student is able to convey his own pedagogical and professional knowledge to the lay and professional community,
- the student is able to set the goals of his own professional development,
- the student is able to apply research and development methods.
Competencies:
- the student is able to evaluate the students in terms of their development and individual characteristics,
- the student is able to use different evalution forms and methods,
- the student is able to evaluate and compare the actual learning process with the planned process,
- the student is able to evaluate students without prejudices and stereotypes,
- the student is able to cooperate with various experts for the sake of his own professional development,
- the student is able to set the goals of his own professional development,
- the student is able to identify with the need for lifelong learning,
- the student is empathetic and socially committed.

Brief syllabus:
- not relevant

Literature:
Literature indicated in the information sheets of the study program.

Language, knowledge of which is necessary to complete a course:
hungarian , slovak

Notes:

Evaluation of subjects
Total number of evaluated students: 102

A	B	C	D	E	FX
44.12	29.41	17.65	6.86	1.96	0.0

Teacher:

Date of last update: 28.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ VSP/25	**Name:** Embedded systems and programming of real-time applications
Types, range and methods of educational activities: **Form of study:** Practical **Recommended extent of course (in hours):** **Per week:** 2 **For the study period:** 26 **Methods of study:** present	
Number of credits: 2	
Recommended semester/trimester of study: 2.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: During the semester, a student may receive 100 points for his/her own project that he/she is working on individually. A grade of A requires at least 90% of the points, a grade of B requires at least 80% of the points, a grade of C requires at least 70% of the points, a grade of D requires at least 60% of the points and a grade of E requires at least 50% of the points. Credit will not be awarded to a student who has not earned 50% of the points at the end of the semester.	
Results of education: Knowledge: Upon completion of the course, the student will be familiar with Embedded Linux. The student knows the basics of Linux, working with command line (shell), Bash scripts, remote setup via ssh and serial port. Can configure the system, install applications and analyze errors. Skills: After completing the course, the student is able to use Linux using the command line, working with basic command line commands. The student will be able to configure a Linux computer. The student will be able to configure a web server on a nested computer, create a private network, and set up a computer remotely. Competencies: Upon completion of the course, the student can utilize his/her skills as an administrator or Linux user. The student can use his/her skills in automation, configurations of IOT devices, information monitors and kiosks.	
Brief syllabus: 1. Linux operating system. Operating system architecture. Linux Kernel, GNU Userland, Busybox and GNU Compiler Suite. 2. Embedded Linux: Buildroot, Yocto and OpenWRT 3. Configure hardware using Device Tree. Configuration format. Using documentation to find out the address of the registry. GPIO, Hearbeat, UART, SPI, I2C and USB peripherals setup. Register status verification. 4. Working with a nested operating system. Command line via ssh. Command line via UART. Setting up the operating system using the command line.	

5. Configuring the operating system. Network configuration. Setting up programs to run automatically.
6. Programs in GNU Userland: vi editor, emacs editor, less, cat, candump, iptools
7. Processes and filters: processes in Linux, signals, programs for handling processes: ps, kill, wait, sleep.
8. Shell Scripting: variables, loops, functions, working with text
9. Cross-compilation of applications. GNU Compiler Suite. CMake configuration system. Creating multiple configurations.
10. Install applications. Copying information between desktop and embedded operating systems. RSYNC, SCP.
11. Web server installation and configuration.
12. Installing a private network using OpenVPN and sending emails.
13. Cross compiler, cross-ng

Literature:

1. SIMMONDS, Ch.: Mastering Embedded Linux Programming. Second Edition. Packt Publishing, 2017. 478 s. ISBN 9781787283282.
2. VIZUETE, D. M.: Instant Buildroot. Packt Publishing, 2013. 60 s. ISBN 9781783289455.

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Student workload distribution:
50% - attendance at classes, practicing acquired knowledge,
50% - studying literature, working on own project.

Evaluation of subjects
Total number of evaluated students: 14

A	B	C	D	E	FX
78.57	7.14	14.29	0.0	0.0	0.0

Teacher: prof. Sándor Szénási, PhD., Mgr. Balázs Vígh,

Date of last update: 21.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ŠIS/25	**Name:** School information systems

Types, range and methods of educational activities:
Form of study: Seminar
Recommended extent of course (in hours):
Per week: 2 **For the study period:** 26
Methods of study: present

Number of credits: 2

Recommended semester/trimester of study: 2.

Level of study: II.

Prerequisites:

Conditions for passing the subject:
The course is completed by a written examination, for which students can obtain 40% of the total number of points. During the semester, students will take a written examination for which they can earn 30% of the total points and 30% of the semester project.
In addition to contact teaching, students prepare for practicals, prepare for the written examination, work on their semester project, and prepare for the examination.
A grade of A requires a minimum of 90 points, a grade of B requires a minimum of 80 points, a grade of C requires a minimum of 70 points, a grade of D requires a minimum of 60 points, and a grade of E requires a minimum of 50 points. Credit will not be awarded to a student who scores less than 50 points.

Results of education:
Knowledge:
Upon completion of the course, the student will:
- knows the basics of creating school information systems,
- has a deeper knowledge of programming,
- knows the implementation procedures.

Skills:
Upon completion of the course, the student will:
- can design school information systems and implement them programmatically,
- can use his/her theoretical knowledge to solve practical problems of application nature.

Competences:
After completing the course the student can work effectively and independently in the process of design and implementation of an information system or its part.

Brief syllabus:
1. Basics of Information Systems, peculiarities of school information systems.
2. Design and programming of school information systems with regard to the application character.
3. The validity of the C++ language in relation to other programming languages, possibilities of use.
4. C++ syntax basics, variables, basic types, structures, references and pointers, operators, expressions and statements.
5. Functions and procedures, compiling source code and creating an application.

6. Working with source code, version control system - GIT, creating versions, branches and revisions.
7. Objects and classes, variables, methods, constructors, copy constructors, destructors.
8. Encapsulation, public, protected and private. Friend functions and friend classes.
9. Structures in STL (Standard Template Library), List, Queue, Vector, Map, Set, Stack.
10. Algorithms in STL. Sort, for_each, copy, fill.
11. User interaction, input processing and response to signals.
12. Organization of the graphical interface and creation of Layouts.
13. Implementing a school information system in practice.

Literature:

1. BAKA, B.: Getting Started with Qt 5. Birmingham : Packt Publishing, 2019. 136 s. ISBN 9781789956030.
2. BENEDEK, Z.: Szoftverfejlesztés C++ nyelven. Bicske : Szak Kiadó, 2007. 510 s. ISBN 9789639131941.
3. STROUSTRUP, B.: A C++ programozási nyelv : I.kötet. Budapest : Kiskapu Kft., 2002. 560 s. ISBN 963 9301 18 3.
4. STROUSTRUP, B.: A C++ programozási nyelv - II. kötet. Budapest : Kiskapu Kft., 2002. 1328 s. ISBN 963 9301 19 1.
5. BASL, J. Podnikové informační systémy: Podnik v informační společnosti 1. vyd. Praha: Grada Publishing, 2002. 142 s. ISBN 80- 247-0214-2
6. BASL, J. – BLAŽÍČEK, R. Podnikové informační systémy: Podnik v informační společnosti 3. vyd. Praha: Grada Publishing, 2013. 323 s. ISBN 978 80 247 4307 3

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
Student workload distribution:
50% - attendance at tutorials, exam preparation,
50% - studying literature, practicing the acquired knowledge, preparing the term paper.

Evaluation of subjects
Total number of evaluated students: 13

A	B	C	D	E	FX
53.85	7.69	23.08	0.0	7.69	7.69

Teacher: Mgr. Norbert Annuš, PhD.,

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KINF/ ŠSm/25	**Name:** Informatics and methodology of teaching
Types, range and methods of educational activities: **Form of study:** **Recommended extent of course (in hours):** **Per week: For the study period:** **Methods of study:** present	
Number of credits: 3	
Recommended semester/trimester of study: 3., 4..	
Level of study: II.	
Prerequisites: KINF/DI1/25 and KINF/MS1/25 and KINF/DI2/25 and KINF/NSU/25 and KINF/MT/25 and KINF/PGR/25 and KINF/PPX6/25	
Conditions for passing the subject: The final exam can be taken by a student who has fulfilled the obligations set out in the study program during the examination of the study carried out in the last year of study. At the oral state exam, the student demonstrates knowledge and skills from his field, including interdisciplinary links and reflection on the development of the relevant scientific fields. Demonstrates the ability to select the content of education in accordance with the required and expected educational goals and to enrich it with school and regional specifics. The final exam is carried out in the form of a colloquium and the student will be evaluated with a classification grade of A to FX. The grade will be included in the overall evaluation of the state exam. The evaluation based on the oral examination will be carried out according to the classification scale: A – 100 - 91%, B – 90 - 81%, C – 80 - 71%, D – 70 - 61%, E – 60 - 50%. Credits will not be granted to a student who does not achieve 50%. The decision on the result will be announced publicly by the chairman of the commission together with the result of the defense of the final thesis.	
Results of education: Knowledge: • the student acquired knowledge from the areas presented within the compulsory and profile subjects of the study program, • the student can define and interpret basic concepts in his own words, explain and describe basic processes, describe and apply basic scientific research methods from the areas listed in the brief outline of the subject, • the student can analyze and evaluate the current state of scientific knowledge in his field, • the student can characterize the concept of teaching, give examples of different types of concepts of teaching and describe the framework for teaching and learning for age groups 11 to 19 years. Skills: • the student can present his professional knowledge, • the student can transfer knowledge, • the student can synthesize and apply acquired theoretical knowledge in practical educational activities,	

• the student can adequately choose educational procedures and apply them functionally,
• the student is able to guide the student on the path of acquiring knowledge, taking into account his individual needs,
• the student has developed skills to learn independently, which allows him to continue further studies.
Competencies:
• the student can demonstrate his language and professional culture during the oral exam,
• the student can use the acquired knowledge in wider contexts,
• the student can implement and synthesize the acquired knowledge in practice,
• the student can creatively use knowledge in solving assigned tasks, analyze a problem and synthesize a new solution,
• the student is able to answer the committee's questions at the required level.

Brief syllabus:
I. Didactics of computer science
II. Mathematical informatics

Literature:
Literature listed in the information sheets of the study programme

Language, knowledge of which is necessary to complete a course:
Hungarian or Slovak

Notes:
The state examination takes place before an examination committee whose members are appointed by the dean.

Evaluation of subjects
Total number of evaluated students: 17

A	B	C	D	E	FX
41.18	47.06	5.88	0.0	5.88	0.0

Teacher:

Date of last update: 19.03.2025

Approved by: Dr. habil. PaedDr. György Juhász, PhD., prof. Krisztián Józsa, DSc., PaedDr. Ladislav Végh, PhD.