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INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ ABT/22	Name: Applied biology and fieldwork in agricultural production
Types, range and methods of educational activities: Form of study: Seminar / Practical Recommended extent of course (in hours): Per week: 1 / 3 For the study period: 13 / 39 Methods of study: present	
Number of credits: 4	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Evaluation of the applied biology section: The condition for passing the subject is active participation in the lessons, which consists of a theoretical and practical part. During the practical part, the student completes laboratory experiments to observe microscopic organisms using a microscope and further observe them during cultivation and inoculation. Students will also develop practical experiments for homework; while these procedures will be simple and do not require complex material and equipment, students will be able to master these experiments later in their practice. The protocols should contain their photo documentation. From the practical part of the subject, the student submits protocols for checking at the end of the semester (40%). Students write a test based on this knowledge (60%) in the credit week. To be awarded credits, achieving 50% of the total number of points is necessary. Evaluation of part of fieldwork from agricultural production: The condition for passing the subject is active participation in the lessons, consisting of a practical and theoretical part. During the practical part, the student attends several demonstrations and visits agricultural enterprises. Get acquainted with the function and practical knowledge of agricultural production. The student will prepare a protocol for each practical part, which will be a condition for completing the subject. The protocols will be documented with their photo documentation. From the practical part of the subject, the student submits protocols for inspection at the end of the semester (5x20 points). 50% of the total points (100) are required to be awarded credits. Total student workload: 4 credits = 100-120 hours 39 hours of participation in contact lessons; 30 hours of preparation of projects and protocols of educational activity and tasks assigned in class; 30-50 hours of self-study; The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: - 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 practical part of applied biology will allow students to acquire basic skills in the microbiology laboratory and an overview of the techniques used in the laboratory and the school environment. The practical part of agricultural production will ensure that students acquire knowledge from agricultural practice, transfer it to everyday life, and orient themselves in agricultural procedures. Students will also be familiar with the system of growing cultural plants on agricultural land or with breeding technology systems of individual species of farm animals.

Knowledge:

- The student can list the most frequently used materials and equipment of the microbiology laboratory and characterize the methods of sterilization and disinfection.
- The student can describe cultivation techniques, types of nutrient soils divided according to different criteria, preparation of nutrient soils, inoculation techniques of nutrient media, their meaning, types and procedures.
- The student knows the principles of microscopy, the procedure for preparing native preparations and staining techniques, and how to document the obtained results.
- The student can classify and recognize individual growing practices
- The student can classify and recognize technological systems and technologies for growing plants and raising farm animals
- The student knows how to navigate the current common agrarian policy of the European Union with an emphasis on sustainable practices in agriculture

Abilities:

- The student can apply his theoretical knowledge in practical experiments focused on the practical use of microorganisms in everyday life, especially bacteria, fungi, yeast, algae and protozoa, which the student may encounter at home or school.
- The student can subsequently use his/her practical skills in school practice and in his/her profession in the teaching process, which is helped by creating protocols with photo documentation and a sufficient theoretical explanation of the experiment.

Competencies:

- The student has a positive attitude toward using microorganisms in ecological processes in the food industry, medicine, biotechnology and agriculture.
- The student has an overview of pathogenic and non-pathogenic microorganisms, which he can incorporate into practice in everyday life. In the teaching process, he can also explain and characterize the emergence of a specific disease caused by microorganisms, viruses, bacteria, protozoa or fungi.
- The student can explain the principle of infection by microorganisms to future generations.
- The student has a positive attitude towards agricultural practices and understands modern technologies and their use in agriculture.
- Based on practical visits, the student can explain individual husbandry procedures for raising farm animals and apply them in the home environment.
- The student has a conscious attitude to the standard agrarian policy and its impact on agricultural production in Slovakia.
- The student has a conscious attitude towards agriculture and its impact on the environment
- The student is active in the pedagogical areas of education within his competencies; he takes responsibility for forming prejudices against microbiological techniques and scientific fields connected with microbiology.

- The student is active in pedagogical areas of education within his competencies and takes responsibility for forming prejudices against agricultural techniques and procedures and their impact on people's everyday life.

Brief syllabus:

1. Laboratory rules, microbiological laboratory equipment.
2. Sterilization by dry and wet heat, filtration, radiation, and pasteurization. Disinfection with chemical agents.
3. Cultivation techniques, nutrient soils, their distribution according to origin, consistency, use, and preparation of nutrient media. Vaccination techniques, vaccination using a vaccination loop, vaccination by hockey.
4. Microscopy, on a dark field, observation of native preparations.
5. Microscopy, observation of permanent microscopic preparations of bacteria and fungi.
6. Staining techniques, vital staining and Gram staining, fixation of preparations.
7. Identification of microorganisms according to morphological characteristics.
8. Inhibition of the growth of microorganisms using radiation and antibiotics, inhibition of the growth of bacteria.
9. Food microbiology in practice. Observation of fungi of the genus *Aspergillus* and *Penicillium*. Monitoring the effect of yeast in different food samples.
10. Observation of the growth of penicillin on fruit and microscopy
11. Effect of preservatives on the reproduction of bacteria.
12. Fermentation process, acceleration and deceleration of the process, microscopic fungi, yeast.
13. Evaluation of homework, a summary of protocols.

A brief outline of fieldwork in agricultural production - practical part:

1. Introduction to agricultural practice and familiarization with procedures for drawing up protocols
2. Practical inspection of an agricultural farm - focus on agrarian policy
3. Practical inspection of an agricultural farm - focus on plant production
4. Practical inspection of the agricultural farm - focus on plant production
5. Practical inspection of an agricultural farm - focusing on livestock breeding
6. Practical inspection of an agricultural farm – focusing on livestock breeding
7. Submission of protocols

A brief outline of fieldwork in agricultural production - seminar part:

1. Origin and development of agriculture.
2. Basic tillage models.
3. Basic sowing procedures in agriculture.
4. Treatment and maintenance of crops.
5. The origin of cultivated plants and their current division.
6. Harvesting field crops.
7. Protection of plants against diseases and pests.
8. Basics of horticulture (vines, fruits, vegetables).
9. Basics of agricultural mechanization.
10. Storage of cultivated plants and storage procedures.
11. Livestock breeding I.
12. Livestock breeding II.
13. The impact of agriculture on the environment.

Literature:

KEVEI F. KUCSERA J.: Mikrobiológiai gyakorlatok I. 1. vyd. – Szeged: JATEPress, 2002, 134 s.

KEVEI F., KUCSERA J.: Mikrobiológia I. 1. vyd. – Szeged: JATEPress, 2002, 301 s.

KEVEI F., KUCSERA J.: Mikrobiológia II. 1. vyd. – Szeged: JATEPress, 1999, 226 s.
 CSETE L, LÁNG I.: A fenntartható agrárgazdaság és vidékfejlesztés : Magyarország az ezredfordulón. - 1. vyd. - Budapest : MTA, 2005. - 313 s. - ISBN 9635084382.
 DERMOT A.: Developing active welfare policy : An Evaluation of the Back To Work Allowance Scheme: WRC Social and Economic Consultant, 2003. - 164 s. - ISBN 0266236.
 KOMONYI E. : Mezőgazdasági alapismeretek. - 1. vyd. - Ungvár : Lira Poligráfcentrum, 2013. - 184 s. - ISBN 978-617-596-129-2.
 NAGY, M., BALÁZS, P.: A jászói kolostorkert = Jasovká kláštorná záhrada. - 1. vyd. - Komárno : Selye János Egyetem, 2017. - 127 s. - ISBN 978-80-8122-228-3.
 MAKOVICKÝ, P.: A mezőgazdaság alapjai: Állattenyésztés. 1. vyd. Komárno: Univerzita J. Selyeho, 2015. 94 s. ISBN 978-80-8122-139-2.
 MAKOVICKÝ, P.: Mikrobiológia. 1. vyd. – Komárno: Univerzita J. Selyeho, 2018, 115 s., ISBN 978 80 8122 235 1.
 SZÉLES, G.: Az agrárgazdaság aktuális kérdései. Budapest : Akadémiai, 2002, 184 s. ISBN 9630560976.

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: Ing. Iveta Szencziová, PhD., RNDr. Eva Tóthová Tarová, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ ANT/22	Name: Integral anthropology
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: 4	
Recommended semester/trimester of study: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: General conditions for passing the subject: active student participation in the lessons, which consist of a theoretical and practical part. <ul style="list-style-type: none"> - student participation in assigned tasks (20%) - involvement in analysis and discussions during lectures (10%) - proposal of an educational activity project (10%) - oral exam (60%) Criteria for evaluation of written works <ul style="list-style-type: none"> - contents (90%) - formal page (10%) Total student workload: 4 credits = 100-120 hours <ul style="list-style-type: none"> - 26 hours of participation in contact lessons; 20 hours of preparation of the educational activity project and tasks assigned in the lessons; 54-74 hours of self-study; The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - The student can characterize the basic concepts of genetics, explain the basic principles of genetics - The student will gain knowledge of the symptomatology of selected mutations, types of inheritance, the basics of cytogenetics, population genetics and methods of genetic analysis Abilities: <ul style="list-style-type: none"> - The student will understand the laws of heredity (classical and population genetics) - The student can explain and use his knowledge of genetics in his pedagogical practice. 	

- The student can practically perform basic laboratory exercises in genetics
- The student can explain the importance of genetics

Competencies:

- The student will gain an overview of the functioning of genetic principles as well as the diseases that can most often affect health, thereby gaining a positive attitude towards protecting and maintaining their health.

Brief syllabus:

1. Introduction to integral anthropology. Creationism and Evolutionism and Human vs Animal - Differences and Parallels
2. Rudiments and atavisms
3. Anatomical, cellular, molecular-biological and genetic evidence of evolution
4. Ethological, psychological, pathological and direct evidence of evolution
5. mt-MRCA and Y-MRCA and other theories of human origin
6. Relative and absolute methods of dating findings of human remains
7. The most important cultures of prehistory and antiquity
8. Systematics and general characteristics of primates
9. Prosimii and Anthropeida – characteristics of recent representatives
10. Hominidae – characteristics of fossil representatives
11. Anthropotaxonomy – physical and ethnic characteristics of the inhabitants of individual continents, racism, ethics.
12. Morphological variability of man - factors of origin, classification, static and dynamic anthropometric measurements
13. Scientific research – sample selection and statistical processing of data from the field of anthropology

Literature:

- BODZSÁR, E., ZSÁKAI, A.: Humánbiológia: Gyakorlati kézikönyv. - 1. vyd.- Budapest: Elte
 CICHÁ, M. Integrální antropologie - 1. vyd. - Praha : Triton, 2014. - 421 s. - ISBN
 978-80-7387-816-0. Eötvös Kiadó, 2004 – 300 s. – ISBN 963 463 653 5.
 FARKAS L., GY. Fejezetek a biológiai antropológiából 1 - 1. vyd. - Szeged : JATEPress, 2000. -
 265 s.
 FARKAS L., GY. Fejezetek a biológiai antropológiából 2 - 1. vyd. - Szeged : JATEPress, 2000. -
 125 s.
 GYENIS, Gy. Humánbiológia : A hominidák evolúciója - Budapest : Nemzeti Tankönyvkiadó,
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 600 s. - ISBN 0-978-0-07-016778-0.
 NAGY, M.: Humánbiológia. – 1. vyd. – Komárno – Dunajská Streda: Selye János Egyetem –
 Lilium Aurum, 2006. – 250 s. – ISBN 8080622833.
 WULF, Ch. Az antropológia rövid összefoglalása - 1. vyd. - Budapest : Enciklopédia Kiadó,
 2007. - 323s. - ISBN 963 9655 09 0.

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: Dr. habil. PaedDr. Melinda Nagy, PhD.					
Date of last update: 23.05.2022					
Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.					

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ CDB/22	Name: Exercises in biology didactics
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, the student must meet the following requirements. Writing a test from the theoretical knowledge (50 points) is necessary. The student must develop two lesson plans. A complete written lesson plan for elementary school (based on the general model) and a complete lesson plan for high school subjects. Two lesson plans are evaluated according to the given criteria: lesson plan (15-15 points), presentation (5-5 points), and formal requirements, with annexes (5-5 points). Total student load: 2 credits = 50-60 hours The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: - 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 is familiar with the current state of biology teaching in primary and secondary education. - The student is aware of planning pedagogical work. - The student orients himself in the didactic analysis of the curriculum (in terms of content, education, training and methodology). - The student is aware of the tasks of preparation for lessons and has mastered the theoretical basics of writing a lesson outline. - The student knows the methods and means of illustration and the tasks of organizing learning experiments and practical tests. - The student knows the possibilities of extracurricular education and its practical importance in learning natural science.	

- The student is aware of the importance of differentiation in reducing early school leaving, the importance of a successful school career and a positive relationship to education in biology.
- The student knows the repository of didactic resources used in teaching biology.
- The student knows the concept of international surveys to measure scientific competencies and current domestic and international results.

Abilities:

- The student can do a didactic analysis of the curriculum on a chosen topic.
- The student can prepare for lessons by writing a lesson outline using a general model.
- The student can plan to implement the biology curriculum in primary and secondary school.
- The student can propose differentiation during the teaching of biology, taking into account the individual characteristics, needs and age characteristics of children.
- The student can familiarize himself with the literature on biological methodology.

Competencies:

- The student should consciously and credibly represent the importance and values of teaching biology
- The student shows a positive approach to expanding the biological knowledge of children and youth in positively shaping their abilities and attitudes.

Brief syllabus:

1. The current state of biology in primary and secondary education. Causes of structural and conceptual changes.
2. Didactic system of biology, compulsory and optional subjects.
3. Objectives of teaching biology in primary and secondary schools.
4. Planning educational work. Planning the annual educational program.
5. Types of learning tasks and performance in terms of the difficulty of cognitive processes, their role and application in acquiring and consolidating knowledge and repetition.
6. Didactic analysis of the curriculum (content, education, upbringing and methodology) and a specific presentation on the chosen topic.
7. Preparation for lessons - written preparation of the complete curriculum of the lesson (general model), presentation for a lecture and interpretation of the curriculum of primary and secondary school.
8. The meaning of illustration and its organisation methods, tools, learning experiments, and practical tests.
9. Opportunities for extracurricular education and extracurricular activities.
10. Differentiation in biological education, catching up, study competitions, talent management.
11. Tools - practical use of tools at individual levels of education. Textbooks, workbooks, worksheets and worksheets.
12. International surveys: PISA (Program for International Student Assessment) measuring science literacy at 15, TIMSS (Trends in International Mathematics and Science Study) in elementary school's fourth and eighth years.
13. The importance of STEM (science + technology + engineering + mathematics, science + technology + engineering + mathematics) and STEAM (+ art, art) in the education of the 21st century in positively shaping children's abilities and attitudes.

Literature:

ALBERT, S., FALUS, I., KOVÁTSNÉ NÉMETH, M., NAGY, M., PUKÁNSZKY, B., SOMOGYI, A.: A tanári kompetenciákról /. - 1. vyd. - Komárom : Selye János Egyetem, 2011. - 134 s. - ISBN 978-80-8122-015-9.

BÓNUS, L., NAGY, L. (2020). Didaktikus játékok használata a természettudományos gondolkodás fejlesztésére biológiaórán. Iskolakultúra, 30(1-2), 3-13. <https://doi.org/10.14232/ISKKULT.2020.1-2.3>

KRISKA GYÖRGY KARKUS ZSOLT: A biológia tanításának elmélete és gyakorlata. Eötvös Kiadó, Budapest, 2015. ISBN 978-963-312-217-4 https://www.eltereader.hu/media/2015/03/Kriska_Karkus_READER.pdf

NAGY, L., NAGY, M. T. (2016). Kutatásalapú tanítás-tanulás a biológiaoktatásban és a biológiatanár-képzésben. Iskolakultúra, 26(3), 57-69. <https://doi.org/10.17543/ISKKULT.2016.3.57>

NAGY, M. In: ALBERT, S.: Az iskolai és óvodai oktatási programok kialakításáról. - 1. vyd. - Komárno : Univerzita J. Selyeho, 2009. - 121 s. - ISBN 978-80-89234-79-0.

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: Dr. habil. Sarolta Zsuzsanna Mészárosné Darvay, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ CDE/22	Name: Exercise in ecology didactics
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, the student must meet the following requirements. The student must write a test from the theoretical knowledge (50 points). The student must plan a study trip and prepare a presentation for it. The study trip is evaluated according to the specified criteria: design of the study trip (30 points), presentation (10 points), formal requirements, and appendices (maps, worksheets) (10 points). Total student load: 2 credits = 50-60 hours The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - The student has basic biological and ecological education and responsible critical thinking. - The student sees ecological processes and interactions in the system and can consciously organize ecologically related pedagogical processes. - The student knows the tasks of teaching and educating ecological, conservation and environmental knowledge. - The student knows the importance of ecological, conservation and environmental knowledge in the institutional program of biological education. - The student knows the scenes of ecologically conscious thinking and action and the formation of environmental culture in school and extracurricular education. - The student knows the concept, goals, tasks, methods and tools of zoopedagogy, museum pedagogy and forest pedagogy. - The student knows the tasks involved in planning, organizing, leading, documenting and evaluating the study trip, eco-walks and thematic days. 	

Abilities:

- The student can recognize ecological processes and interactions in the system, the main stages of the transformational action of man on the environment, and understands their natural, social and economic consequences.
- The student can consciously organize ecologically related pedagogical processes.
- The student can participate in pedagogical planning.
- The student can design practical tasks related to environmental culture, taking into account children's individual characteristics, needs and age characteristics.
- The student can develop the environmental culture and eco-awareness of children and youth with the principles of sustainability education

Competencies:

- The student has a positive approach to implementing the strategy of educating children and youth towards environmental sustainability.
- The student commits to developing environmentally conscious behaviour and sustainable life with a personal role model for his environment.
- The student is open to possible cooperation, application and integration of new theories and methods in environmental culture and ecological awareness.

Brief syllabus:

1. The importance of ecological, conservation and environmental knowledge, education for environmental sustainability in the Anthropocene period, and its current status in primary and secondary education.
2. Goals of ecological knowledge, eco-knowledge, environmental culture and education for environmental sustainability, didactic system, connection with the subject of natural science and non-natural science in primary and secondary schools. Individual and community responsibility prevents human transformation's natural, social and economic consequences.
3. A complete institutional approach to the formation of environmentally conscious behaviour, the role of institutional management, and its place in the annual educational program of schools. The subject of biology and places of implementation of teaching inside and outside the institution.
4. Pedagogical methods in informal and formal educational environments. Concept, purpose, tasks, methods and tools of zoopedagogy, museum pedagogy and forest pedagogy. Theory and practice of responsible animal husbandry.
5. Values of national and local natural heritage, place and role of traditional ecological knowledge in environmental sustainability.
6. Biodiversity in school, conditions for planning a school garden, planning and organization, collection of suitable methods from practice.
7. School and local government, institutions, non-governmental organizations, etc. The importance of cooperation in local education about environmental sustainability. The importance of the citizen science method in ecological research in the formation of ecologically conscious thinking.
8. Planning, organizing, leading, documenting and evaluating the discovery tour, eco-walk, forest school, field exercise, and green-themed days.
9. Study trip, eco-walk, teaching and educational tasks, presentation at a specific, selected place of the school or extracurricular environment.
- 10-13. Presentation and assessment of students.

Literature:

ALBERT, S., FALUS, I., KOVÁTSNÉ NÉMETH, M., NAGY, M., PUKÁNSZKY, B., SOMOGYI, A.: A tanári kompetenciákról / . - 1. vyd. - Komárom : Selye János Egyetem, 2011. - 134 s. - ISBN 978-80-8122-015-9.

HORTOBÁGYI T, SIMONS T.: Növényföldrajz, társulástan és ökológia. Nemzeti Tankönyvkiadó, 2000. - 538 s. - ISBN 963 19 1100 4.
 KERÉNYI A.: Európa természet és környezetvédelme. Nemzeti Tankönyvkiadó, Budapest, 2003
 KOVÁTS-NÉMETH, M., BODÁNE KENDROVICS RITA.: A környezetpedagógia elmélete és gyakorlata. Palatia Nyomda és Kiadó, Győr, 2015. - 279 s. - ISBN 978-963-7692-64-2.
 KOVÁTS-NÉMETH, M.: Fenntarthatóság, pedagógia, kutatás. - 1. vyd. – Győr, NyugatMagyarországi Egyetem Apáczai Csere János Kar, 2007. - 227 s. - ISBN 978-963-9364-85-1
 KOVÁTS-NÉMETH, M.: Az erdőpedagógiától a környezetpedagógiáig. Comenius Kft, Pécs, 2010, ISBN 978-963-9687-18-9
 NAGY, M. In: ALBERT, S.: Az iskolai és óvodai oktatási programok kialakításáról. - 1. vyd. - Komárno : Univerzita J. Selyeho, 2009. - 121 s. - ISBN 978-80-89234-79-0.

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: Dr. habil. Sarolta Zsuzsanna Mészárosné Darvay, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ DIB/22	Name: Didactics of biology
Types, range and methods of educational activities: Form of study: Lecture / Seminar 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: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: General conditions for passing the subject: active student participation in the lessons, which consist of a theoretical and practical part. <ul style="list-style-type: none"> - student participation in assigned practical and theoretical tasks (20%) - involvement in analysis and discussions during lectures and seminars (10%) - proposal of an educational activity project (10%) - oral exam (60%) Evaluation criteria for written works Processing of selected thematic units from the teaching material of the biology subject for 5th - 9th grades. Primary and secondary school years: educational tasks, methods and tools: <ul style="list-style-type: none"> - contents (90%) - formal page (10%) Total student workload: 4 credits = 100-120 hours <ul style="list-style-type: none"> - 39 hours of participation in contact lessons; 20 hours of preparation of the educational activity project and tasks assigned in the lessons; 35-60 hours of self-study; The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - The student can characterize the basic concepts of the teaching process - The student acquires knowledge about the critical problems of subject didactics with an emphasis on the educational process, its management and the possibilities of making it more effective. Abilities:	

- The student acquires pedagogical abilities and skills and learns to create lesson models.
- The student can transform his knowledge of biology for the age group of 10-19 years and pass it on during the teaching of biology.
- The student can explain the importance of biology didactics

Competencies:

- The student will gain an overview of the functioning of the teaching process, the teaching of biological subjects, the teaching of cross-cutting topics, the goals of the pedagogical process, and the curricular reform.

Brief syllabus:

1. Types of lessons. Motivational lessons. Expository lessons - aimed at acquiring new knowledge. Fixation hours - consolidating knowledge. Evaluation hours - checking and evaluating knowledge.
2. Organizational forms in the teaching of biology. Distribution, essential characteristics, types of lessons: teaching in the classroom, teaching in specialized areas of the school (laboratory, computer classroom, etc.), teaching outside the classroom (in the museum, in the zoo, etc.).
3. Teaching and education in the field. Division, essential characteristics, types of lessons: Walk, excursion, trip. Education of the gifted and talented. Club of biologists at elementary school, G or high school. Biology competitions. Extracurricular activities.
4. Students' theoretical knowledge of biology. Key competencies of the pupil. Pupil motivation. A number of students in the teaching process. Frontal (mass) form of teaching. Group form of teaching. The individual form of teaching.
5. Information-receptive teaching methods in biology - concept, division. Essential characteristics of the methods – continuous interpretation with demonstration, description, narration, and explanation. Give an example of a curriculum where and how they would apply it.
6. Dialogic teaching methods in biology. Essential characteristics and classification - interview method with demonstration, heuristic, free working interview. Give an example of a curriculum where and how they would apply it.
7. Research teaching methods in biology: Observation, experiment, project - essential characteristics, function, tasks and classification. Give an example of a curriculum where and how they would apply it.
8. Working with literature in teaching biology. Secondary sources of information – textbooks, atlases, keys, maps, explanatory dictionaries, lexicons, etc. Primary sources of information – scientific and professional publications, monographs, anthologies, lectures, etc.
9. Didactic means teaching biology. ICT in biology teaching. Learning aids. Laboratory aids. Live material.
10. Objective of the lesson and examination methods. Assess and control knowledge, skills and habits and their application in elementary, middle and high school. Teacher preparation for a biology lesson at elementary, middle and high school - components and structure of the lesson. Theoretical preparation, written preparation, technical preparation.
11. The current status of biology in the Slovak educational system. Biology in the State educational program and the school educational program. The current position of biology in the curricula of primary and secondary schools. Causes of structural and conceptual changes. Changes after the school reform in the teaching of natural history and biology.
12. Planning educational work. Didactic system of biology, compulsory and optional subjects. Objectives of biological education in elementary school and gymnasiums (final, staged, partial). Year-round work plan, time-thematic plan. Biology teacher. The personality of the biology teacher. Biology teacher education. Further education and lifelong learning of a biology teacher.
13. Realization of educational aspects in the teaching of biology and natural history - sex education and parenting education, health education, ecological and environmental education in biology - possibilities of application in the curriculum of elementary schools and high schools.

Literature:

BAJTOŠ, J., HAMBALÍK, A. Didaktika laboratórných predmetov. - Bratislava : STU - Slovenská Technická Univerzita, 1998. - 44 s. - ISBN 8022710881

BERNÁTOVÁ, R., BERNÁT, M., PORÁČOVÁ, J., NAGY, M. Teaching of the thematic unit photosynthesis in the natural sciences with didactics for teacher training programmers in primary education with the support of the interactive whiteboard. 2020. Journal of Science Education = Revista de Educacion en Ciencias = Revista de Educacion en Ciencias. - ISSN 0124-5481, Vol. 21, no. 2 (2020), p. [1-10].

BERNÁTOVÁ, R., BERNÁT, M., PORÁČOVÁ, J., NAGY, M. a kol. Visualization of the logical structure of biologically and ecologically oriented curriculum and its application in teaching to increase the level of understanding of causality (Coherence of cause and effect) in the curriculum. 2019. In: Journal of Science Education = Revista de Educacion en Ciencias = Revista de Educacion en Ciencias. - ISSN 0124-5481, Vol. 20, no. 2 (2019), p. 54-75. SCOPUS.

BODZSÁR, É.: Kézikönyv a biológiatanítás módszertanához, Trefort Kiadó, Budapest 2005

FALUS, I.: Didaktika. - Budapest : Nemzeti Tankönyvkiadó, 2003. - 552 s. - ISBN 9631952967

CHOCHOLOUŠKOVÁ, Z. Didaktika biologie ve vztahu mezi obecnou a oborovou didaktikou - 1. vyd. - Plzeň : Západočeská univerzita v Plzni, 2019. - 280 s. - ISBN 978-80-261-0846-7.

KALHOUS, Z., OBST, O.: Školní didaktika. - 2. vyd. - Praha : Portál, 2009. - 448 s. - ISBN 978-80-7367-571-4

KRISKA, GY., KARKUS, ZS. A biológia tanításának elmélete és gyakorlata - 1. vyd. - Budapest : ELTE Eötvös Kiadó, 2015. - 344 s. - ISBN 978-963-312-217-4.

NAGY, M. Egészségfejlesztő iskolai oktatási program kialakításáról. In: Albert, S. Az iskolai és óvodai oktatási programok kialakításáról. Komárno: Univerzita J.Selyeho, 2009, S. 17-51. ISBN 978-80-89234-79-0.

Štátny pedagogický ústav (2015): Štátny vzdelávací program BIOLÓGIA. (Vzdelávacia oblasť: Človek a príroda), Posúdila a schválila ÚPK pre biológiu pri ŠPÚ, Bratislava 2015, Dostupný na: <http://www.statpedu.sk/sk/Statny-vzdelavaci-program/Statny-vzdelavaciprogram-pre-2-stupen-zakladnych-skol-ISCED-2/Clovek-a-priroda.alej>

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: Dr. habil. PaedDr. Melinda Nagy, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ DS-B/22	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 thesis topic 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 seven days after the deadline, he/she will not receive the credits for the course. The tutor determines the length of the ready part of the thesis to be handed in, and 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, – an expression of personal opinion supported by theoretical knowledge, – the definition of the problem and the aim of the work, how 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, – the 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. The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: - 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 can:

- list and explain the general requirements for the preparation of the Master's thesis, describe and characterise 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, and plagiarism, distinguish between quotation 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 familiar with the basic terms used in the thesis,
- explain the basic 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.

Abilities:

The student can:

- 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 the various methods of citation correctly 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,
- conclude 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 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,
- applying theoretical knowledge to teaching practice.

Competences:

The student

- is aware of the importance of respecting academic ethics and the ethical implications for his/her student and future teaching activities,
- acts following the rules of good conduct,
- has mastered the basics of social appearance and is dressed appropriately for the state examination,
- adheres to the ethical principles of citation
- expresses his/her beliefs and opinions straightforwardly and honestly while accepting that the other party has the right to form his/her own opinion,
- bears and accepts the consequences of his/her actions.

Brief syllabus:

1. Requirements for the Master's thesis in the JSU guidelines.
2. Importance of the Master's thesis. The importance of scientific research and publishing.
3. Scientific integrity and research ethics.
4. Selection of the Master's thesis topic.
5. Tasks and objectives of the Master's thesis.
6. Choice of final thesis methodology.
7. Content of the thesis. Conceptualization and strategy of processing individual parts - chapters.
8. Work with book and magazine literature.
9. Use of the Internet and online publications
10. Citing the used literature and making a list of the literature.
11. Preparation and implementation of research. Processing and evaluation of results. Graphical and tabular and image tools and their use. Documentation of scientific work. Appendices of the final thesis.
12. Discussion of the results, conclusions and summary.
13. Presentation of results using PowerPoint and poster. Preparation for the defence of the final thesis.

Literature:

- A magyar helyesírás szabályai. 2015. Budapest: Akadémiai Kiadó. 12. kiadás. ISBN 978 963 05 9631 2
- ECCO, U.: Hogyan írjunk szakdolgozatot? Kairosz, 1987. - 255. - ISBN 9639137537
- CHAJDIÁK, 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
- MADARÁSOVÁ, J. (red.) 2000. Pravidlá slovenského pravopisu. Bratislava: VEDA. ISBN 8022406554
- 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.
 NAGY-GYÖRGY, J.: Valószínűség számítás 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.
 Smernica rektora č. 2/2021 o úprave, registrácii, sprístupnení a archivácii záverečných, rigorózných a habilitačných prác na Univerzite J. Selyeho. 2021. Komárno: UJS

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: Ing. Pavol Balázs, PhD., Dr. habil. Sarolta Zsuzsanna Mészárosné Darvay, PhD., Dr. habil. PaedDr. Melinda Nagy, PhD., Ing. Iveta Szencziová, PhD., RNDr. Eva Tóthová Tarová, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ EKO/22	Name: Ecology
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: At the end of the semester, the student writes a test (50 points) from the theoretical part of the subject. Furthermore, he will prepare a seminar paper and a presentation on a selected ecological topic during the semester. The evaluation will be carried out: relevance of the literature used (5 points), presentation of the literature (25 points), maximum of 10 pages, with pictures, graphs (10 points), and presentation (10 points). The student also passes an oral exam. Total student workload: 4 credits = 100-120 hours 26 hours of participation in contact lessons; 30 hours of preparation of the educational activity project and the tasks assigned in the lessons; 44-64 hours of self-study; The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: - 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 knows the professional terminology of the scientific discipline. - The student has a basic ecological education. - The student knows ecological events and sees mutual influences in contexts. - The student sees the interaction of man and nature and the place of man in nature. - The student understands the risks of an excessive human reshaping of the environment. Abilities: - Based on his own information, the student can independently identify ecological problems. - The student recognizes ecological phenomena in practice. - Based on his ecological knowledge, the student is capable of critical thinking. - With the help of his basic ecological education, the student can evaluate the consequences of the devastating human activity in context.	

-The student is capable of more thorough knowledge of the systems of nature to create ecological thinking.

Competencies:

- The student takes a positive attitude towards ecological phenomena.
- The student's ecological mindset; he respects his living and non-living surroundings.
- The student leads his surroundings to a positive and ethical perception of the environment.

Brief syllabus:

Lecture:

1. Concept, content and division of ecology. The place of ecology among the natural sciences
- 2., Autecology. Ecological factors and their role.
3. Global climate change and its ecological consequences.
- 4., Water as an abiotic ecological factor.
- 5., Soil and relief.
- 6., Biotic environmental factors: trophic, intraspecific and interspecific influences
- 7., Anthro - zoogenic factors
- 8., Demecology, Population definition, population structure, factors regulating populations.
9. Population size - mechanisms of regulation.
- 10., Synecology. Biocenosis and biotope. Properties of biocenoses. Food chains.
- 11., Ecological niche. Bioregions (ecoregions) and ecosystem.
- 12., Basics of biogeography. I. - phytogeography
- 13., Basics of biogeography. II. - zoogeography

Seminar:

- 1., A living organism and its environment.
- 2., Ecological importance of abiotic ecological factors of the environment - light, temperature.
- 3., Changing the atmosphere's composition and the ecological consequences of this change.
- 4., Ecological consequences of water pollution.
- 5., Factors endangering the soil.
- 6., Biogeochemical cycles.
- 7., Human population as an ecological factor.
- 8., Natural resources.
- 9., The country and its changes. Biodiversity and its changes - flora.
- 10., Biodiversity and its changes - flora.
- 11., Biodiversity and its changes - fauna.
- 12., Protected areas and their ecological importance.
- 13., Final test

Literature:

HORTOBÁGYI T, SIMON T.: Növényföldrajz, társulástan és ökológia. Nemzeti Tankönyvkiadó, 2000. - 538 s. - ISBN 963 19 1100 4

KERÉNYI A.: Európa természet és környezetvédelme. Nemzeti Tankönyvkiadó, Budapest, 2003

KLINDA J. Environmentalistika a právo II.2003. - 0. - ISBN 808883304

SZABÓ M., ANGYAL Zs. A környezetvédelem alapjai i. Typotex, 2012. https://ttk.elte.hu/dstore/document/1134/EJ-A_kornyeztvedelem_alapjai_OK.pdf

TEREK J., VOSTAL Z., (2009): Základy ekológie a environmentalistiky. PU v Prešove FHPV, Prešov, ISBN 978-80-555-0094-2.

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: Dr. habil. Sarolta Zsuzsanna Mészárosné Darvay, PhD., Ing. Pavol Balázs, PhD.					
Date of last update: 23.05.2022					
Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.					

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ ENV/22	Name: Environmental education and sustainability
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: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: During the semester, the student must meet the following requirements. Writing a test from the theoretical knowledge (50 points) is necessary. The student develops a project and creates a presentation. It is evaluated according to the specified criteria: project proposal (30 points), presentation (10 points), formal requirements, and attachments (project diary, reflection) (10 points). Total student load: 2 credits = 50-60 hours The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: - 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 can use his ecological knowledge to interpret global and local problems of the Anthropocene period - The student knows the sustainable development goals of the United Nations and related educational tasks - The student is aware of the possibilities of environmental sustainability education in school and outside of school - The student knows the term project pedagogy, organizational forms, methods, tools, types of pedagogy - The student knows the theoretical foundations and practical tasks related to project planning and implementation Abilities: - The student can identify the causal connections of fundamental problems in nature-society - economy and their relationship and identify their causes with students	

- The student can design practical tasks for environmental sustainability, taking into account children's individual characteristics and the age group's characteristics.
- The student can plan and implement an environmental sustainability project in group work. The student can complete the project documentation and has self-reflection
- The student can apply the acquired knowledge in the transmission of an ecologically conscious approach and in the transmission of a sustainable way of life.
- The student knows how to help his students to become responsible citizens in environmental studies.

Competencies:

- The student commits to a productive lifestyle and is responsible for himself, his peers and the environment.
- The student consciously and credibly represents the values of environmental sustainability education.

Brief syllabus:

1. The causes of the unsustainable world order of the Anthropocene era, the consequences of ecological, social and economic impacts and the goals of sustainable development of the United Nations.
2. Conceptual framework of education for environmental sustainability, development of the concept, connection of education for environmental sustainability with sustainable development goals.
3. Global and local level of environmental problems, local problems of our environment, and our responsibility in solving problems.
4. Opportunities for education about environmental sustainability in and outside of school.
5. The concept of project pedagogy, its role in imparting knowledge, developing skills and attitudes.
6. Forms, methods and tools of organizational, task-oriented activities of project pedagogy.
7. Steps of the teaching-educational strategy in project pedagogy.
8. Project teaching techniques, techniques based on student initiative; cooperation techniques; creative inquiry, research techniques.
9. Types of projects: aesthetic-artistic creation, intellectual creation, creation of a material tool.
10. Implementation of project pedagogy in a natural learning environment, goal, role and methods of forest pedagogy.
11. Project planning and implementation process.
12. The role of self-reflection in project pedagogical work.
13. Test writing

Literature:

- KERÉNYI Attila.: Európa természet és környezetvédelme. Nemzeti Tankönyvkiadó, Budapest, 2003
- KOVÁTS-NÉMETH, Mária., BODÁNE KENDROVICS RITA.: A környezetpedagógia elmélete és gyakorlata. Palatia Nyomda és Kiadó, Győr, 2015. - 279 s. - ISBN 978-963-7692-64-2.
- KOVÁTS-NÉMETH, Mária.: Fenntarthatóság, pedagógia, kutatás. - 1. vyd. – Győr, NyugatMagyarországi Egyetem Apáczai Csere János Kar, 2007. - 227 s. - ISBN 978-963-9364-85-1
- KOVÁTS-NÉMETH, Mária.: Az erdőpedagógiától a környezetpedagógiáig. Comenius Kft, Pécs, 2010, ISBN 978-963-9687-18-9.

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: Dr. habil. Sarolta Zsuzsanna Mészárosné Darvay, PhD.					
Date of last update: 23.05.2022					
Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.					

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ EPI/22	Name: Basics of epidemiology
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:	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Total student load: 1 credit = 25-30 hours Students participate in 13 hours of teaching. Through self-study, in the range of 15 hours, they prepare for the final test for 50 points. The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: - 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 knows the task's subject and epidemiology's history. - The student knows the epidemiology of non-infectious (civilized) diseases, - Knows the role of epigenetic factors in the development of diseases. - The student knows the systematic classification of pathogens. - The student knows the most important infectious diseases. - The student has basic epidemiology knowledge and knows prevention tips. - The student knows the role of the school in the prevention process. Abilities: - The student can analyze epidemiological indicators of domestic and international epidemiological statistics. - The student can apply his knowledge of health science in practice. - The student can organize and implement the activities necessary to manage epidemics, taking into account the peculiarities of the age categories of the youth. Competencies: - The student positively approaches the tasks of epidemiological prevention and the tasks during the epidemic at schools.	

- The student is a role model in preventing diseases by personal example.

Brief syllabus:

1. The subject of epidemiology, its role, and history.
2. Development of the epidemiological situation in Slovakia compared to international, mainly European, development.
3. Epidemiology of the essential non-infectious diseases. The role of epigenetic factors in the development of diseases.
4. Epidemiology of the most important infectious diseases. System of pathogens. Bacteriology, virology, mycology, parasitology.
5. The concept of infection and influencing factors. Infectious disease, epidemic. Basics of statistics.
6. Basic concepts of immunology, the concept of immunity, and its types.
7. Classification of infectious diseases based on their entry into the human body 1. Respiratory infections, diseases of the digestive tract, infections from food, infectious diseases of the bloodstream and lymphatic system.
8. Classification of infectious diseases based on their entry into the human body 2. Infectious diseases penetrate through the immune system, and diseases spread through sexual contact.
9. Classification of infectious diseases based on their entry into the human body 3. Zoonoses.
10. Basic epidemiological knowledge, subject of epidemiology, its importance.
11. Driving forces of the epidemic. Necessary activities in the event of epidemics.
12. Possibilities of prevention. The role of schools in prevention.
13. Final test.

Literature:

- BETINA, V.: Mikrobiológia 1.,2. Bratislava : Slovenská Technická Univerzita, 1993, 472 p. ISBN 8022705764.
- HORÁKOVÁ, K.: Mikrobiológia 2. Bratislava : Slovenská Technická Univerzita, 1993, 214 s. ISBN 802270525
- KEVEI F., KUCSERA J.: Mikrobiológia I. 1. vyd. – Szeged: JATEPress, 2002, 301 s.
- KEVEI F., KUCSERA J.: Mikrobiológia II. 1. vyd. – Szeged: JATEPress, 1999, 226 s.
- KOPP M.: Epigenetika, epidemiológia és magatartásorvoslás. Magyar Tudomány, 2012, 923-930. <http://www.matud.iif.hu/2012/08/06.htm>
- MAKOVICKÝ, P.: Mikrobiológia. 1. vyd. – Komárno: Univerzita J. Selyeho, 2018, 115 s., ISBN 978 80 8122 235 1.
- NAGY, M.: Humánbiológia. – 1. vyd. – Komárno – Dunajská Streda: Selye János Egyetem – Lilium Aurum, 2006. – 250 s. – ISBN 8080622833.

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: Ing. Pavol Balázs, PhD., Dr. habil. Sarolta Zsuzsanna Mészárosné Darvay, PhD., Dr. habil. PaedDr. Melinda Nagy, PhD., RNDr. Eva Tóthová Tarová, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ ETO/22	Name: Ethology
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: The condition for passing the subject is active participation in the seminars, which consist of a theoretical and practical part. As part of the practical part, the student will have to prepare a seminar paper based on the knowledge he acquired while teaching the subject. The seminar paper will consist of professional terms and topics of an ethological nature. The seminar paper must meet the content and formal requirements of scientific writing. At the end of the semester, the student submits the seminar paper for review and presents it as a presentation (20%). Final written test on theoretical knowledge during the exam period (80%). Total student workload: 3 credits = 75-90 hours. 26 hours of participation in contact lessons; 20 hours of preparation of the educational activity project and tasks assigned in the lessons; 35-45 hours of self-study; The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: <ul style="list-style-type: none"> - 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 student acquires new knowledge about ethology, expands knowledge of professional terms and can understand and perform basic ethological procedures. Knowledge: <ul style="list-style-type: none"> - The student can apply the acquired knowledge in the teaching-learning process of biology. - The student becomes familiar with ethology as a science, its meaning and the correct application of ethological procedures. - The student will expand his knowledge about animal behaviour and the principles of keeping individual species of animals. - The student can draw up an ethogram. Abilities:	

- The student can understand ethological concepts, procedures, and valid legislative standards.
- The student can develop a complex seminar work and use the knowledge from it in practice.
- The student knows how to work with an ethogram and observation tools for creating an ethogram.
- The student can use the acquired knowledge in practice and is also able to interpret it for other persons or students in the future teaching process.

Competencies:

- The student will develop a more positive relationship and understanding with animals and gain more self-confidence in his abilities.
- By better understanding individual types of animal behaviour, the student will acquire lifelong knowledge that will positively affect his attitude towards nature and living creatures.
- The student is active in pedagogical areas of education within his competencies and takes responsibility for forming prejudices against ethological procedures and their effective use in practice. Presentation and submission of semester papers.

Brief syllabus:

1. Introduction to ethology.
2. Ontogeny of behaviour.
3. Brain and higher nervous activity.
4. Forms of learning.
5. Optical communication.
6. Means of non-verbal communication.
7. Acoustic communication.
8. Contact behaviour.
9. Olfactory communication.
10. Mutilating behaviour.
11. Food behaviour.
12. Reproductive behaviour.
13. Presentation and submission of semester papers

Literature:

- CSÁNYI V.: Etológia. - 1. vyd. - Budapest : Nemzeti Tankönyvkiadó, 2002. - 755 s. - ISBN 963 19 3230 3.
- CSÁNYI V.: Kis etológia. - 1. vyd. - Budapest : Kossuth Kiadó, 2002. - 263 s. - ISBN 963 09 4309 3.
- CSÁNYI V.: Etológia és társadalom : Apró írások / Csányi Vilmos. - 1. vyd. - Budapest : Ulpiusház Könyvkiadó, 2005. - 374 s. - ISBN 963 7253 89 0.
- BREED, M.D., MOORE, J.: Animal Behavior. Academic Press, Jan 4, 2011 - Science - 496 pages, ISBN 978-0-12-372581-3
- LEWIS, D., REZEK, J.: Tajná řeč těla. - 1. vyd. - Praha : Nakladatelství Bondy, 2010. - 256 s. - ISBN 978-80-904471-7-2

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: Ing. Iveta Szencziová, PhD.
Date of last update: 23.05.2022
Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ EVO/22	Name: Evolutionary biology
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: Completing the subject is conditional on a final knowledge test for 100 points and preparing a seminar paper on the subject. Total student workload: 3 credits = 75-90 hours The student will participate in 26 hours of teaching. He works for 20 hours preparing the seminar paper and learning to test by self-study in the range of 30-45. The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - The student will consider evolution as a natural process establishing and maintaining the existence of life on Earth. - He is familiar with the main mechanisms of evolutionary processes. - He can recognize and understand the evolutionary process in nature based on current scientific knowledge. Abilities: <ul style="list-style-type: none"> - The student can compare creationist and evolutionary theories of the development of the Earth. - The student can critically evaluate opinions about evolution and accept conclusions in its favour. Competencies: <ul style="list-style-type: none"> - The student can take a well-founded position on the issue. - The student in his environment can present the evolutionary theory of development soundly. 	
Brief syllabus:	

- 1., Evolutionary theories and creationism
- 2., Biological evolution
- 3., Heredity of mutation
- 4., Natural selection
- 5., Genetic drift, gene flow
- 6., Origin of life
- 7., Evolution of ontogenesis and life cycle
- 8., Evolution of sexual reproduction and its evolutionary consequences
- 9., Evolution of behaviour
- 10., Coevolution, the evolution of parasites
- 11., Species, speciation
- 12., Extinction, phylogenetics
- 13., Taxonomy, macroevolution

Literature:

CSÁNYI, V., MIKLÓSI, Á.: Fékevesztett evolúció : Megszaladási jelenségek az emberi evolúcióban. - 1. vyd. - Budapest : Typotex, 2010. - 180 s. - ISBN 978 963 279 287 3.

FAZEKAS, GY., SZERÉNYI, G.: Biológia I.: Molekulák, élőlények, életműködések. - 3. vyd. - Budapest : Scolar, 2015. - 591 s. - ISBN 978-963-244-568-7.

FAZEKAS, GY., SZERÉNYI, G.: Biológia II.: Ember, bioszféra, evolúció. - 3. vyd. - Budapest : Scolar, 2015. - 573 s. - ISBN 978-963-244-569-4.

FORRÓ, L.: A Kárpát-medence állatvilágának kialakulása. Magyar Természettudományi Múzeum, Budapest, 2007.

LARSON, E. J.: Az evolúció. - 1. vyd. - Budapest : Európa Könyvkiadó, 2009. - 369 s. - ISBN 978 963 07 8697 3.

MUEHLENBEIN, M.P: Human Evolutionary Biology, Cambridge Un. Press, 2011.

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: Ing. Pavol Balázs, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ GEN/22	Name: Genetics
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: 5	
Recommended semester/trimester of study: 1.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: General conditions for passing the subject: active student participation in the lessons, which consist of a theoretical and practical part. <ul style="list-style-type: none"> - student participation in assigned practical and theoretical tasks (30%) - involvement in analysis and discussions during lectures (5%) - proposal of an educational activity project (5%) - oral exam (60%) Protocol evaluation criteria: <ul style="list-style-type: none"> - content page of protocols (50%) - formal protocol page (10%) - manual skills (40%) Total student load: 5 credits = 125-150 hours <ul style="list-style-type: none"> - 39 hours of participation in contact lessons; 11 hours of preparation of protocols; 20 hours of practice of the educational activity project and tasks assigned in the lessons; 55-70 hours of self-study; The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - The student can characterize the basic concepts of genetics, explain the basic principles of genetics - The student will gain knowledge of the symptomatology of selected mutations, types of inheritance, the basics of cytogenetics, population genetics and methods of genetic analysis Abilities:	

- The student will understand the laws of heredity (classical and population genetics)
- The student can explain and use his knowledge of genetics in his pedagogical practice.
- The student can practically perform basic laboratory exercises in genetics
- The student can explain the importance of genetics

Competencies:

- The student will gain an overview of the functioning of genetic principles as well as the diseases that can most often affect health, thereby gaining a positive attitude towards protecting and maintaining their health.

Brief syllabus:

1. Introduction to genetics. Basics of genetic terminology.
2. Molecular basis of genetic information – structure and types of DNA and RNA.
3. Replication, transcription, translation of DNA, genetic code (examples, solving assigned tasks).
4. Laws of cell division - cell cycle, cell cycle regulation, cell differentiation. Programmed cell death - apoptosis, unprogrammed cell death - necrosis, cell senescence.
5. Laws of reproduction, asexual, sexual reproduction types. Gametogenesis, spermatogenesis, apomixis, fertilization in vitro.
6. Chromosome basis of heredity – structure and number of chromosomes, prokaryotic and eukaryotic chromosomes.
7. Heredity of organisms - monogenic inheritance, multifactorial inheritance, polygenic inheritance, extranuclear inheritance.
8. Mendel's rules of heredity - laws, examples, solving assigned tasks. Morgan's rules - binding of genes, forms, phases, examples, solving assigned tasks.
9. Mutations - classification of mutations (spontaneous, induced, mitochondrial, somatic, gene), mutagens, mutations and the environment. Chromosome aberrations – numerical, structural causes of chromosome aberrations.
10. Gene regulation of ontogenesis – regulation during zygote furrowing, cell differentiation and embryonic induction, the ontogenesis of sex in mammals, humans, etc. Morphological, developmental defects - natural, pharmaceutical, industrial, agricultural, metabolic teratogens.
11. Mutants with malformative and lethal effects. Genetically conditioned pathological conditions – numerical aberrations of autosomes, gonosomes, structural aberrations of chromosomes.
12. Genetics of populations - a genetic structure of the population, model of autogamous and panmictic population, Hardy-Weinberg law of genetic balance (examples, solution of assigned tasks), the population's gene pool, migration, adaptive value and a genetic load of the population.
13. Investigation methods used in genetics include hybridological, genealogical, gemeliological, cytogenetic, and molecular-genetic. Prenatal diagnosis - invasive and non-invasive methods of prenatal diagnosis, Fetal DNA Diagnosis from Maternal Blood method

Literature:

- CAMPBELL, A. M., HEYER, L. J. Genomika, proteomika, bioinformatika - 1. vyd. - Budapest : Medicina Könyvkiadó Rt., 2004. - 381 s. - ISBN 963 242 882 X.
- HOFMANOVÁ, B., MAJZLÍK, I., MACH, K., VOSTRÝ, L. Genetika se základy biometriky : Návody na cvičení. - 1. vyd. - Praha : Česká zemědělská univerzita v Praze, 2008. - 126 s. - ISBN 978-80-213-1800-7.
- MARÓY, P. Genetika BS - 3. vyd. - Szeged : Jate Press, 2014. - 281 s. - ISBN 978-963-306-003-2.
- MARÓY, P. Haladó genetika - 1. vyd. - Szeged : JatePress, 2010. - 135 s. - ISBN 978-963-482-977-5.
- PECSENYE K. Populációgenetika - 1. vyd. - Nagykovácsi : Pars Kft., 2006. - 401 s. - ISBN 963 06 0325 X.

PORÁČOVÁ, J., NAGY, M. a kol.: General and Applied Biochemistry for Natural-Sciences – 1. vyd. – Budapest: Műszaki Pedagógia Tanszék, 2021. – 223 s. – ISBN 978-963-421-847-0.

PORÁČOVÁ, J., VAŠKOVÁ, J., NAGY, M. a kol. 2015. Všeobecná genetika. Prešov: FHPV PU. 397 s. ISBN 978-80-555-1523-6.

PORÁČOVÁ, J., MARIYCHUK, R., NAGY, M. a kol.: Základné biochemické procesy organizmov – 1. vyd. – Prešov: Prešovská univerzita v Prešove, Fakulta humanitných a prírodných vied - 2015. – 343 s. – ISBN 978-80-555-1514-4.

PORÁČOVÁ, J., NAGY, M., ZAHATŇANSKÁ, M. et al.: Biometria živočíchov a človeka. Prešovská univerzita v prešove, FHPV, Univerzita J. Selyeho v Komárne, PF, Centrum excelentnosti

SNUSTAD, D. P., SIMMONS, M. J. 2009. Genetika. Brno: Masaryková univerzita. 894 s. ISBN 978-80-210-8613-5.

SRŠEŇ, Š., SRŠŇOVÁ, K. 2005. Základy klinickej genetiky a jej molekulárna podstata. 4. prepracované a rozšírené vydanie. Martin: Osveta. 445 s. ISBN 80-8063-185-9.

YONG-KYU KIM. Handbook of Behavior Genetics - 1. vyd. - New York : Springer, 2009. - 560 s. - ISBN 978-0-387-76726-0.

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: Dr. habil. PaedDr. Melinda Nagy, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ KRZ/22	Name: Cultivated plants and farm animals
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: 3.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: Cultivated plants part At the end of the semester, the student writes a test (50 points) from the theoretical part of the subject. Next, he will prepare a seminar paper and a presentation about the selected cultural plant. The evaluation will take place: relevance of the used literature (25 points), presentation (25 points). Final grade: 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. Farm animals part The condition for passing the subject is active participation in the lessons, which consists of a theoretical and practical part. As part of the practical part, the student will have to prepare a seminar work based on the knowledge he acquired while teaching the subject. The seminar work will consist of professional terms and topics of a breeding nature. The seminar work must meet the content and formal requirements of scientific writing. At the end of the semester, the student presents the seminar work as a visual presentation and submits the text part for review (100%). Point distribution of the seminar work: presentation of the topic and scope (20%), presentation of the literature review and citations (20%), analysis and graphic evaluation of the topic (20%), drawing conclusions and formulating proposals (20%), elaboration and formal requirements (20%). Total student load: 2 credits = 50-60 hours 26 hours of participation in contact lessons; 20 hours of preparation of the educational activity project and tasks assigned in the lessons; 10-20 hours of self-study; The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: - 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 student acquires new knowledge about cultivated plants and farm animals, expands his knowledge of technical terms and can pass on his knowledge.

Knowledge:

- The student can apply the acquired knowledge in the teaching-learning process of biology.
- The student learns about cultivated plants, their origin, and their economic groups.
- The student will become familiar with the basic types of farm animals and the technological procedures of their breeding.
- The student will acquire basic knowledge about the ecological aspects of running agricultural production in Slovakia.
- The student will acquire knowledge of the interdependence of crop production with animal production, farming methods in the country and their sustainability.

Abilities:

- The student can understand agrotechnical concepts, procedures, and agriculturally essential works.
- The student can develop a complex seminar work and use the knowledge from it in practice.
- The student can use the acquired knowledge in practice and is also able to interpret it for other persons or students in the future teaching process.

Competencies:

- The student will develop a more positive relationship with cultivated plants, farm animals and husbandry practices and gain more self-confidence in their abilities.
- Through a better understanding of animal husbandry, the student will acquire lifelong knowledge that will positively affect his attitude towards nature and the soil.
- The student is active in pedagogical areas of education within his competencies; he takes responsibility for forming prejudices against agrarian procedures and their effective use in practice.

Brief syllabus:

Part of cultivated plants

1. Nomenclature of cultivated plants,
2. The place of cultivated plants in the plant system. - Species, varieties.
3. Development centres of cultivated plants.
4. Cereals.
5. Oil products.
6. Fodder.
7. Vegetables (fruit and root).
8. Vegetables (other groups of vegetables)
9. Fruits (seeds and nuts)
10. Fruits (other groups of fruits)
11. Spices.
12. Medicinal plants.
13. Ornamental plants.

Part of farm animals

1. Origin and development of agriculture.
2. Domestication of livestock and development of livestock breeds.
3. Modern technologies in cattle breeding.
4. Modern technologies in pig breeding.
5. Modern technologies in sheep breeding.
6. Modern technologies in poultry farming.
7. Modern technologies in the breeding of small farm animals.
8. Modern technologies in beekeeping.

9. Modern technologies in horse breeding.
10. Animal welfare
11. Ecological aspects of livestock breeding
12. Presentation of seminar papers
13. Presentation of seminar papers

Literature:

TUBA Z, - SZERDAHELYI T.,- ENGLONER A., - NAGY J.: Botanika II. - Rendszertan : Bevezetés a növénytanba, algológiába, gombatanba és a funkcionális növényökológiába - 1. vyd. - Budapest : Nemzedékek Tudása Tankönyvkiadó, 2007. - 523 + 62 s. - ISBN 978-963-19-5849-2.

GOJDIČOVÁ E., MÁRTONFI P., MÁRTONFIOVÁ L.: Botany - Vascular Plants = Botanika - Cievnaté rastliny - 1. vyd. - Ružomberok : Institute of the High Mountain Biology University of Žilina, 2008. - 167 s. - ISBN 978-80-88923-12-1.

ANTAL J. : A növénytermesztés alapjai = Gabonafélék. - 1. vyd. - Budapest : Mezőgazda, 2005. - 391 s. - ISBN 963 286 205 8.

ANTAL J.: Gyökér- és gumós növények, hüvelyesek, olaj- és ipari növények, takarmánynövények. - 1. vyd. - Budapest : Mezőgazda, 2005. - 595 s. - ISBN 963 286 206 6.

ÁNGYÁN JÓZSEF, MENYHÉRT ZOLTÁN. : Alkalmazkodó növénytermesztés, környezet- és tájgazdálkodás / - 1. vyd. - Budapest : Szaktudás Kiadó Ház, 2004. - 559 s. - ISBN 963 9553 14 X.

SZABÓ F.: Általános állattenyésztés. - 1. vyd. - Budapest : Mezőgazda Kiadó, 2015. - 478 s. - ISBN 978-963-286-711-3.

NAGY, M., BALÁZS, P.: A jászói kolostorkert = Jasovká kláštorná záhrada. - 1. vyd. - Komárno : Selye János Egyetem, 2017. - 127 s. - ISBN 978-80-8122-228-3.

MAKOVICKÝ, P.: A mezőgazdaság alapjai: Állattenyésztés. 1. vyd. Komárno: Univerzita J. Selyeho, 2015. 94 s. ISBN 978-80-8122-139-2. SZÉLES, G.: Az agrárgazdaság aktuális kérdései. Budapest : Akadémiai, 2002, 184 s. ISBN 9630560976.

KOMONYI É.: Mezőgazdasági alapismeretek. - 1. vyd. - Ungvár : Líra Poligráfcentrum, 2013. - 184 s. - ISBN 978-617-596-129-2.

BEDNÁR V.: Moje najmilovanejšie zvieratá. - 1. vyd. - Bratislava : Regent, 2016. - 75 s. - ISBN 978-80-88904-92-2.

DERMOT A.: Developing active welfare policy : An Evaluation of the Back To Work Allowance Scheme: WRC Social and Economic Consultant, 2003. - 164 s. - ISBN 0266236.

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: Ing. Iveta Szencziová, PhD., Ing. Pavol Balázs, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ OB/22	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:	
Level of study: II.	
Prerequisites:	
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 - 100-91%, B - 90-81%, C - 80-71%, D - 70-61%, E - 60-50%. 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 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 student 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.

<p>2. The main points of the thesis supervisor' and opponent's reviews are presented.</p> <p>3. The student answers the questions of the supervisor and the opponent.</p> <p>4. Professional discussion of the Master's Thesis, when the student answers questions.</p> <p>The presentation of the Master's thesis should mainly include the following points:</p> <p>1. A brief justification of the choice of topic, its relevance and practical utility.</p> <p>2. Explanation of the objectives of the thesis and the methods used.</p> <p>3. The main content of the thesis.</p> <p>4. The conclusions and proposals drawn by the student.</p> <p>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.</p> <p>The final thesis is available to the committee before and during thesis defence.</p>					
<p>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</p>					
<p>Language, knowledge of which is necessary to complete a course: Hungarian or Slovak</p>					
<p>Notes:</p>					
<p>Evaluation of subjects Total number of evaluated students: 0</p>					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
<p>Teacher:</p>					
<p>Date of last update: 23.05.2022</p>					
<p>Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.</p>					

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ PED/22	Name: Pedology
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: Completion of the subject is conditional upon passing the final written examination for 100 points. Total student load: 2 credits = 50-60 hours The student will participate in 26 contact lessons. He prepares for the test by self-study for 25-35 hours. The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - The student understands the processes of soil formation. - The student has basic knowledge of soil genesis and its classification - The student knows the properties of extended soil groups and their types. Abilities: <ul style="list-style-type: none"> - The student can evaluate some soil properties. - The student understands the importance of land for human society. - The student is sensitive to the devastating soil treatment in his surroundings and draws attention to the harmful effects of further soil degradation. Competencies: <ul style="list-style-type: none"> - The student takes a positive attitude toward preserving the quality of the soil fund in his surroundings. - The student perceives soil as a dynamic and ever-evolving system that needs to be protected, and he also leads his surroundings to protect it. 	

Brief syllabus:

- 1., Soil, definition, formation, development and composition of the soil.
2. Soil properties and indicators of soil condition.
- 3., Soil profile and its morphological characteristics,
- 4., Physical and chemical properties of soils.
- 5., Biological properties of soils.
- 6., Micro- and macro-edaphone.
- 7., Soil classifications. A morphogenetic classification system of soils I.
- 8., Morphogenetic classification system of soils II. Soil maps.
- 9., Land in agriculture. Land in horticulture.
- 10., Land in forestry. Land in protected areas.
- 11., Land in other sectors of the national economy. Soil and environment.
12. Land acquisition by human society for settlement development, municipal waste storage.
- 13., Sustainable use versus soil erosion.

Literature:

- CSERNI, I.: Talajtan és agrokémia. 1. vyd. Kertészeti és Élelmiszeripari Egyetem : Kecskemét, 1995. 206 s.
- STEFANOVITS, P.- MICHÉLI, E.: A talajok jelentősége a 21. században - 1. vyd. Budapest : MTA Társadalomkutató Központ, 2005. 403s. ISBN 963 508 477 3.
- STREĎANSKÝ, J.: Zabezpečenie kvality životného prostredia. Nitra : Vysoká Škola Poľnohospodárska, 1997. 114 s. ISBN 80-7137-340-0.
- SZENDREI, G.: Talajtan. Egyetemi jegyzet. 1. vyd. Budapest : Elte Eötvös Kiadó, 1998. 300 s. ISBN 0003191.

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: Ing. Pavol Balázs, PhD.

Date of last update: 23.05.2022

Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ PPX4/22	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: 0

A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Teacher:					
Date of last update: 09.05.2022					
Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.					

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ PPX5/22	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:

Pozorovanie a hodnotenie interiéru a exteriéru cvičnej ZŠ a SŠ.

Poznávanie a práca s pedagogickou dokumentáciou triedy a školy.

Pozorovanie vytvárania podmienok, realizácie a hodnotenia vyučovacích hodín na 2. stupni ZŠ a na SŠ.

Odborný rozbor pozorovaných vyučovacích hodín spoločne s cvičným učiteľom.

Dokumentovanie priebehu a výsledkov jednotlivých pozorovaných vyučovacích hodín.

Didaktické postupy pri vyhotovení písomných príprav (so všetkými jeho súčasťami), prekonzultovanie s cvičným učiteľom.

Príprava podmienok na realizáciu vyučovacej hodiny.

Realizovanie naplánovanej a pripravenej vyučovacej hodiny s aplikáciou inovatívnych stratégií, s využitím adekvátnych učebných zdrojov ZŠ a SŠ.

Hodnotenia vyučovacej hodiny naplánovanými a vybranými metódami a prostriedkami hodnotenia z vlastného pohľadu, z pohľadu žiakov (a s prvkami sebahodnotenia).

Odborný rozbor s cvičným učiteľom: dokumentovanie, hodnotenie prípravy a jej využitia a ostatných súčastí vyučovacej hodiny.

Príprava portfólia z hospitačnej činnosti so všetkými jeho súčasťami na základe vopred stanovených kritérií vedúcim pedagogickej praxe s uplatnením samostatnosti a alternatívnosti vychádzajúc zo súčasných trendov didaktiky.

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:					
Date of last update: 13.07.2022					
Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.					

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ PPX6/22	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: 0

A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Teacher:					
Date of last update: 13.07.2022					
Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.					

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ VEZ/22	Name: Earth Sciences
Types, range and methods of educational activities: Form of study: Lecture / Seminar / Practical Recommended extent of course (in hours): Per week: 1 / 2 / 1 For the study period: 13 / 26 / 13 Methods of study: present	
Number of credits: 5	
Recommended semester/trimester of study: 2.	
Level of study: II.	
Prerequisites:	
Conditions for passing the subject: The condition for passing the subject is active participation in the lessons, which consist of a lecture, two seminars and one practical lesson. Within the seminars, student presentations on selected geological topics are also evaluated; at the same time, during the semester, the student continuously works on a seminar paper, which he submits at the end of the seminar. During the semester, the student passes two written examinations, in the middle and at the end of the semester. In the final exam, the student proves his theoretical knowledge with an oral and written exam on the subject. Total student workload: 5 credits = 125-150 hours The student will participate in 26 hours of teaching. He works for 20 hours on the presentation and another 20 on the seminar work. He prepares for the interim study checks and the final exam by self-study in 60-80 hours. The condition for successful completion of the subject is obtaining at least 50% of the maximum point evaluation of the subject. Overall evaluation of the success of the subject: - 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 knows the basics of the professional terminology of the scientific field. - The student can identify the subject's basic conceptual, categorical and methodological apparatus. - After completing the subject, the student has the basic knowledge of geological disciplines necessary for teaching in primary and secondary schools. - The student knows the exospheres and endospheres of the Earth and their characteristics. - The student knows the opinions supported by scientific evidence about the origin and development of the Earth and life on it.	

Abilities:

- The student can perceive inanimate nature as a prerequisite for the existence of living things, including humans.
- The student can identify the problems of the devastation of inanimate nature and take a stand in the interest of its protection.

Competencies

- The student has a positive attitude towards the diversity of inanimate nature.
- The student understands the connections of the phylogeny.
- The student leads his surroundings to a considered attitude about the extraction of raw materials.

Brief syllabus:

- 1., Introduction to the issues of mineralogy and crystallography, historical development, basic terms
 - 2., Lattice and crystal structure, Bravais basic cells, symmetry, crystal shapes,
 - 3., Laws of crystal morphology (from the constancy of angles, from the rationality of parameters, from the band)
 - 4., Crystallographic systems I.
 - 5., Crystallographic systems II.
 - 6., Structural properties of crystals.
 - 7., Crystal chemistry - properties of atoms in crystalline substances, chemical bonds and their properties.
 - 8., Physical properties of minerals,
 - 9., Bowen's reaction scheme of gradual crystallization - formation of minerals and rocks in the initial phase of magma solidification
 - 10., Bowen's reaction scheme of gradual crystallization - formation of rock-forming minerals (olivines, pyroxenes, amphiboles, phyllosilicates) and rocks in the primary phase of magma solidification I.
 - 11., Bowen's reaction scheme of gradual crystallization - formation of minerals (tectosilicates, zeolites) and rocks in the primary phase of magma solidification II.
 - 12., Bowen's reaction scheme of gradual crystallization - formation of minerals and rocks in the final phase of magma solidification.
 - 13., Minerals as raw materials.
- Earth sciences – seminar I. – part geology
- 1., Introduction to the study of geological sciences, the concept and tasks of geology, and a brief history of geology.
 - 2., Exospheres of the Earth.
 - 3., Earth's endosphere.
 - 4., Basic characteristics of the lithosphere.
 - 5., Magmatic rock system, magmatism - formation of magma, its characteristics, types of magmatism and volcanism.
 6. Sedimentary rock system - factors of weathering, physical and chemical.
 - 7., Erosion, transport and accumulation of weathered material, transport mechanisms and their manifestations.
 - 8., Types of sediments and their characteristics.
 - 9., Sedimentary environments on the oceanic and continental crust.
 - 10., Diagenesis and formation of sedimentary rocks.
 - 11., Metamorphic rock system - metamorphic process, metamorphic environments, mineral transformations, metamorphoses of selected rocks.
 - 12., Mutual transformations of rock types.
 - 13., Applied geology

Earth sciences – seminar II. – part of palaeontology

- 1., The origin and development of the universe and the Earth in it.
- 2., The origin and development of the Earth in cosmic contexts.
- 3., Origin and development of the theory of plate tectonics.
- 4., Global geological phenomena related to plate movements.
- 5., Age determination methods. Basics of stratigraphy.
- 6., Geohistoric age and geochronology.
- 7., Development of the Earth and life on it in the Archaic.
- 8., Development of the Earth and life on it in the Proterozoic.
- 9., Development of the Earth and life on it in the Paleozoic - mountain-forming processes, rocks.
- 10., Development of the Earth and life on it in the Paleozoic - living nature (general characteristics).
- 11., Development of the Earth and life on it in the Mesozoic and Cainozoic - mountain-forming processes, rocks.
- 12., Development of the Earth and life on it in the Mesozoic and Cainozoic - living nature (general characteristics).
- 13., Development of the Carpathians and the Carpathian Basin in geohistoric times.

Earth sciences - practical lesson - part palaeontology

- 1., Theories of the origin of life on Earth - creationist, scientific
- 2nd, Conditions enabling the creation of the biosphere on Earth.
 1. Fossilization - a condition for obtaining knowledge about extinct organisms.
 2. Evolution – the driving force behind the development of living organisms.
 3. Extinction of taxons - geohistorical boundaries.
- 6., Review of studies in earth sciences.
- 7., Development of taxonomic groups of plants and animals, and man-lower plants and invertebrates.
- 8., Development of taxonomic groups of plants and animals, and man - invertebrates.
- 9., Development of taxonomic groups of plants and animals, and man - higher plants.
- 10., Development of taxonomic groups of plants and animals, and man.- vertebrates I. (fish, amphibians, reptiles, birds).
- 11., Development of taxonomic groups of plants and animals, and humans - vertebrates II. (mammals and man).
- 12., Review of studies in earth sciences.
- 13., Possible scenarios of the action of geological factors and man on the development of the Earth and life on it.

Literature:

- BÁLDI T. (2003): A történeti földtan alapjai - 1. vyd. - Budapest : Nemzeti Tankönyvkiadó, 2003. - 308 s. - ISBN 963 19 4514 6.
- ČABALOVÁ D. a kol.: Geológia. - 3. vyd. dotlač. - Bratislava : STU, 2012. - 211 s. - ISBN 978-80-227-3644-2.
- FARIEL, R. E. a kol.: Earth Science. - 1. vyd. - Menlo Park : Addison-Wesley, 1987. - 642 s. - ISBN 0-201-21451-2.
- GÉCZY B., (1986): Őslénytan. Tankönyvkiadó, Budapest, ISBN 963 17 9501 2.
- GÉCZY B., (1993): Ősállattan. Invertebrata Paleontologia, Nemzeti Tankönyvkiadó, Budapest. ISBN 963 18 46007 5
- GÉCZY B., (1994): Ősállattan. Vertebrata Paleontologia, Nemzeti Tankönyvkiadó, Budapest. ISBN 963 18 4325 4
- HÁLA, J. (2006): Ásványok, kőzetek, hagyományok. 2. vyd. - Budapest, 2006. - 262 s. - ISBN 963 567 034 6.

<p>MIKLÓS, L., IZAKOVIČOVÁ, Z.: Atlas of representative geosystems of Slovakia. - 1. vyd. - Banská Štiavnica : Slovak Academy of Sciences, 2006. - 123 s. - ISBN 80-969272-5-6. PÁPAY L.: Kristályok, ásványok, kőzetek. - 1. vyd. - Szeged : JATEPress, 1998. - 382 s. SÜMEGI P.: A negyedidőszak földtani és öskörnyezettani alapjai. - 1. vyd. - Szeged : JATEPress, 2001. - 262 s. - ISBN 963 482 524 9. SZAKÁLL S.: Ásványrendszertan. - 1. vyd. - Miskolc : Miskolci Egyetemi Kiadó, 2005. - 336 s. - ISBN 963 661 672 1. SZEDERKÉNYI T.: Ásvány-kőzettan. - 1. vyd. - Szeged : JatePress, 2001. - 112 s.</p>						
<p>Language, knowledge of which is necessary to complete a course: Hungarian or Slovak</p>						
<p>Notes:</p>						
<p>Evaluation of subjects Total number of evaluated students: 0</p>						
A	B	C	D	E	FX	
0.0	0.0	0.0	0.0	0.0	0.0	
<p>Teacher: Ing. Pavol Balázs, PhD.</p>						
<p>Date of last update: 23.05.2022</p>						
<p>Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.</p>						

INFORMATION SHEET

Name of the university: J. Selye University	
Name of the faculty: Faculty of Education	
Code: KBIO/Bdm/ ŠS/22	Name: State Examination
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:	
Level of study: II.	
Prerequisites:	
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 - 100-91%, B - 90-81%, C - 80-71%, D - 70-61%, E - 60-50%. 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: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - 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, 	

<ul style="list-style-type: none"> - 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. <p>Competences:</p> <ul style="list-style-type: none"> - 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. 					
<p>Brief syllabus:</p> <p>I. Genetics, anthropology and applied biology II. Earth Sciences and Ecology III. Didactics of biology</p>					
<p>Literature: Literature indicated in the information sheets of the study programme</p>					
<p>Language, knowledge of which is necessary to complete a course: Hungarian or Slovak</p>					
<p>Notes:</p>					
<p>Evaluation of subjects Total number of evaluated students: 0</p>					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
<p>Teacher:</p>					
<p>Date of last update: 23.05.2022</p>					
<p>Approved by: Dr. habil. PaedDr. Melinda Nagy, PhD.</p>					