



Practice Learning in University Teaching

Spring semester, 2021-2022

The course is proposed for students in the academic year 2020-2021 as an optional.

Coordinator	Alla Nekos
Credits	3 ECTS (optional course), 24 in-class hours
Lecturers	Alla Nekos (Karazin Institute of Environmental Sciences, V.N. Karazin Kharkiv National University, Ukraine)
Level	PhD students
Host institution	Karazin Institute of Environmental Sciences, V.N. Karazin Kharkiv National University, Ukraine
Course duration	February - May

Summary

This 3 ECTS course serves as Skills course of the project INTENSE. The course "Practice Learning in University Teaching" is designed for the program of training specialists of third educational-scientific level (PhD) based on master's programs in the field of environmental policy, management of natural resources and technologies. This course provides opportunities to expand practical skills and gain competence in organizing any practical classes and practices that are a compulsory component of a learning process. The course requires a basic knowledge of international environmental policy and environmental policy of native state, the basics of rational nature management, the ecological state of environmental components, the definition of qualitative and quantitative characteristics of pollution, the ability to manage environmental quality and make managerial decisions. In addition, course familiarizes PhD students with technologies and techniques for practical training in university education, techniques for forming the content of practical classes and laboratory workshops, designing quality teaching materials for practical classes, advanced technologies in the educational process, practices for creating professional documentation, etc. The course includes practical classes and seminars that develop practical skills in laboratories, forms information retrieval skills for working with diverse sources, the practice of organizing student research work and the skills of organizing curatorial activities at the university.

Target student audiences

PhD students in natural and environmental sciences, who have received basic knowledge in the field of environmental policy, management of natural resources and technologies (Code No. 103)

Prerequisites

Required courses (or equivalents):

- General ecology
- Environmental Monitoring
- Chemical Ecology
- Geochemistry. Analytical research methods.
- Methods of scientific research
- Pedagogy and psychology in higher education
- Methods of teaching ecology
- Field and occupational training



Aims and objectives

The main goal of the course is to form specific knowledge, competence and practical skills for the future teaching and research activity of a specialist of third educational-scientific level (PhD). In the beginning, it is necessary to outline the historical experience and directions of university education. To familiarize students with the experience and modern approaches in the organization of practical training in university education. To determine the competence regarding practical training of a modern university teacher. Within the course, the competence of a modern teacher of higher education institutions or a scholar in various practical skills will be discussed, formulated and developed, starting with the methodology and technique of forming the contents of practical classes and laboratory workshops, the practice of mastering the instructions for laboratory equipment, ending with the practices of the organization and conducting briefings when working with instruments and equipment in specialized laboratories. Based on the previous experience of PhD students, their knowledge about field practices, the technology of field practice organization, and the preparation of the necessary documentation will be updated. PhD students will be invited to independently develop the content and structure of field practice internships for undergraduate students. As the preparation of masters in the curriculum foresees conducting of pedagogical practice, respectively, students will master the content and technology of conducting pedagogical practice. In order to develop and maintain creative potential both during the period of training and in future scientific or teaching activities, it is necessary to learn the practice of problem learning, which will be offered to for a self-study. Special attention is paid to the issues of computerization of university education, modern information and communicative techniques, their advantages and disadvantages, as well as issues of computer training technology. It is important to consider international and domestic experience and mastering the practice of distance learning using the platform Moodle. Some part of the course is devoted to the formation of purely pedagogical skills, the consideration of modern principles and paradigms of teaching at the university, the clarification of the psychology of partner relationships between the teacher and the student, as well as the formation of communicative skills and maintaining the psychological positive climate in the team. The topic of skills, ethics, speech and style of a university teacher is offered for a self-study. Studying work practices in the system of curatorial institutions and practices of organizing student's research work is also necessary for the discussion and formation of specific competencies.

General learning outcomes:

At the end of the course, the success of the PhD students should be reflected in the knowledge gained and competencies developed. They must master the technology of designing practical training in university education, to know modern teaching practices at universities: methods, approaches, technologies, main modern principles and paradigms of teaching in universities, features of modern education in the context of the European space; know how to develop and implement the principle of mobility for students and teachers in university education, understand the essence and necessity of using problem-learning practices, visualization techniques, gamemaking, and the use of communicative space on the Internet; to know the methodology and practice of education in the format of distance learning, its principles, specifics and perspectives; be able to develop the necessary professional documentation (plans, reports, methodological developments, regulations, orders, etc.); be able to perform information retrieval work to obtain a variety of information; know modern technologies for conducting



scientific conferences, discussions, panel discussions, on-line skype-conferences, webinars, etc.; know the basic principles and requirements for describing the results of scientific research, writing scientific papers, theses and articles.

Overview of sessions and teaching methods

The presentation of the course material will in most cases have the interactive-dialogue nature with extensive use of discussion techniques. Course will start with a review of evolution and modern domains of university education. Methods for updating knowledge and various techniques for perception, comprehension and assimilation of material will be used. This will serve as a starting point for further training. The next lessons will include interactive lectures, lectures-discussions, lecture-dialogues in the "problem - ways of solution" form. Through the use of advanced teaching methods, PhD students are encouraged to identify and argue the competences of practices that a modern teacher of higher education should possess. An important part of the course is work in computer classes, during which the issues related to computerization of university education, teaching methods in the format of distance learning within the Moodle platform will be revealed. Brainstorming techniques will be used in the form of problem-based learning by which students will work in groups and make collective decisions that will encourage the development of partnerships, mutual respect and mutual understanding in any society. PhD students have to master specific topics on their own, analyze and emphasize their own point of view during the workshops. There will also be offered topics for mastering the practice of independent methodological developments (the structure and content of curatorial hours, gamemaking for presentation of study material, a plan for holding summer field practice, a scenario for organizing and conducting on-line skype-conferences and webinars, creative suggestions on how to organize the work of student scientific society, etc.).

Course workload

Activities	Learning outcomes	Assessment	Estimated workload (hours)
In-class activities			
Lectures	Understanding of basics, concepts, methodology, and tools of SD	Class participation	4
Practical works	The need to study the historical experience and modern practices of university education. Formation of information - search skills. Study of technologies of organization of work in laboratories. Technologies for organizing field, production, and pedagogical practices. Educational practices in distance format	Paper assignments and presentations	16
Seminars	Formation of competencies for discussions, round tables, on-line Skype, Zoom, Google meet - conferences, webinars, etc. Modern technologies of higher university education.	Class participation and readiness to complete tasks and active participation in discussions	4



Independent work			
Individual tasks: - Development of presentations - Writing review essays	Formation of skills of information - search work, critical analysis, elaboration of various national and world educational technologies.	Quality of presentations, quality of analytical abstracts	40
Preparation for discussions, express - surveys, colloquia, final test control	Critical analysis of modern technologies for practical training in university education	Class participation, creative and active contribution to the discussion, quality of test and interviews	26
Total			90

Grading

Evaluation of PhD students will be based on the following:

- the level of readiness to participate in seminars, dialogues and discussions in the classroom (20%) (100% for the active participation and demonstration of knowledge to 0% for a complete disregard for the work in the classroom)
- work in groups during the "brainstorming" (20%) (from 100% for actively demonstrated contribution to 0% for complete non-participation)
- quality of practical work performed (25%)
- the quality of self-made methodological developments (35%)

Educational activity	Max	Min
In-class discussions during lectures	4	2
Practical work 1	5	2
Practical work 2	5	2
Practical work 3	5	2
Practical work 4	5	2
Practical work 5	5	3
Practical work 6	5	3
Practical work 7	5	3
Practical work 8	5	3
Seminar 1	8	4
Seminar 2	8	4
Final control	40	20
Total	100	50

At the end of the course the student will have an exam. Grading system is presented below:

Scores	Mark
90 – 100	Excellent
70-89	Good
50-69	Satisfactory



1-49	Not passed
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Course schedule

Day	Time	Topic	Lecturer
Day 1	2 hours	Lecture 1	A.Nekos
Day 2	2 hours	Practical work 1	A.Nekos
Day 3	2 hours	Practical work 2	A.Nekos
Day 4	2 hours	Seminar 1, 2	A.Nekos
Day 5	2 hours	Practical work 3	A.Nekos
Day 6	2 hours	Practical work 4	A.Nekos
Day 7	2 hours	Lecture 2	A.Nekos
Day 8	2 hours	Practical work 5	A.Nekos
Day 9	2 hours	Practical work 6	A.Nekos
Day 10	2 hours	Practical work 7	A.Nekos
Day 11	2 hours	Practical work 8	A.Nekos
Day 12	2 hours	Seminar 3	A.Nekos
Day 13	2 hours	Final test	A.Nekos

Course assignments

The course includes the following practical works and seminars:

Topic	Number of hours
Practical work 1 Technologies for creating licensing and accreditation cases	2
Practical work 2 Principles for the development of various "Regulations« "	2
Seminar 1 The latest technologies of the educational process	1
Seminar 2 Practices of creating the necessary professional documentation	1
Practical work 3 Elaboration of instructions and technologies of work with laboratory equipment. Organization and instruction of safety	2
Practical work 4 Formation of information retrieval skills to work with various sources.	2
Practical work 5 Computer learning technologies.	2
Practical work 6 Educational practices in distance format	2
Practical work 7 Practices of the institute of curatorship at the university	2
Practical work 8 Technologies for organizing field, production and pedagogical practices	2
Seminar 3 Formation of competencies for discussions, round tables, on-line Skype, Zoom, Google meet - conferences, webinars, etc.	2



Literature

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