



Engineering pedagogy

Syllabus

Requisites of the Course

Cycle of Higher Education	<i>Second cycle of higher education (Master's degree)</i>
Field of Study	<i>12 Information technologies</i>
Speciality	<i>121 Software engineering</i>
Education Program	<i>Software Engineering of Multimedia and Information Retrieval Systems</i>
Type of Course	<i>Normative</i>
Mode of Studies	<i>full-time</i>
Year of studies, semester	<i>2nd year of study, 3rd semester</i>
ECTS workload	<i>18 hours for lectures, 18 hours for assignments, 24 hours for self-study.</i>
Testing and assessment	<i>Assessment, modular test, calendar control</i>
Course Schedule	<i>According to rozklad.kpi.ua</i>
Language of Instruction	<i>English</i>
Course Instructors	<i>Onipko Zoryana Serhiivna, Ph.D. e-mail: zoriana.onipko@gmail.com</i>
Access to the course	<i>Google classroom. Access is granted to registered users</i>

Outline of the Course

1. Course description, goals, objectives, and learning outcomes

Studying the course "Engineering pedagogy" allows students to develop the competencies necessary for solving the pedagogical activity problems.

The purpose of the course "Engineering pedagogy" is the preparation of master's students for future teaching activities in institutions of higher education and the formation of integral, pedagogical, professional and didactic competences and control competence.

The subject of the course "Engineering pedagogy" are patterns and ways of designing the educational content, the learning and training process of future specialists in engineering specialties.

Studying the course "Engineering pedagogy" forms general competences (GC) and professional competences (PC) in students:

GC04 Ability to communicate with representatives of other professional groups of different levels (with experts from other fields of knowledge / types of economic activity).

GC05 Ability to generate new ideas (creativity).

Studying the course "Engineering pedagogy" contributes to students' formation of the following program learning outcomes (PLO) according to the educational program:

PL017 Collect, analyze, evaluate the information needed to solve scientific and applied problems, using scientific and technical literature, databases and other sources.

2. Prerequisites and post-requisites of the course (the place of the course in the scheme of studies in accordance with curriculum)

To study the course "Engineering pedagogy» the student needs skills in using a computer text editor, skills in working with electronic databases of scientific institutes and libraries.

The course is studied after mastering the courses of psychological orientation in the bachelor's training program. Studying the course will allow student to master the courses of the general and professional training cycles more effectively.

3. Content of the course

Topic 1. Introduction to the engineering pedagogy study.

Topic 2. Learning process psychological and didactic foundations.

Topic 3. Classification of educational activities and teaching methods types.

Topic 4. Peculiarities of pedagogical communication.

Topic 5. Peculiarities of future engineers education.

Topic 6. Methodological support of the educational process.

Topic 7. Education quality assurance system and learning outcomes control.

Topic 8. New learning technologies

Modular test

Credit

4. Coursebooks and teaching resources

Main literature

1. Golovenkin V.P. Engineering pedagogy (electronic edition): Textbook. - K.: NTUU "KPI named after I. Sikorsky", 2017.
2. Engineering pedagogy. Methodical recommendations for studying the course. [Electronic resource]. – Access mode: <http://www.kpi.ua/>.
3. Internet publication on the problems of pedagogy. 4. Fitsula M.M. Higher school pedagogy: Education. manual - K.: "Akademvydav", 2006. - 352 p. (Alma mater).
5. Yakubovska S.S. Psychology and pedagogy. Education manual. – Rivne: NUVHP, 2012. – 324.

Additional literature:

1. Butenko N.Yu. Pedagogical practice: preparation and implementation: Education. manual / [N.Yu. Butenko, L.M. Hryshchenko] / For general ed. N.Yu. Butenko. - K.: KNEU, 2005. - 184 p.
2. Volkova N.P. Professional and pedagogical communication: Education. manual. - K.: VC "Akademiya", 2006. - 256 p. (Alma mater).
3. Makarova L.I., Gakh Y.M. Basics of psychology and pedagogy: Study guide. - Kyiv: Center for Educational Literature, 2005. - 116 p.
4. Higher school pedagogy: Education. manual / Z.N. Kurlyand, R.I. Khmelyuk, A.V. Semenova and others.; Edited by Z.N. Courland. - from that ed., revised. and additional - K.: Znannia, 2007. - 495 p.
5. Savchyn M.V. Pedagogical psychology: Teaching. manual - K.: Akademvydav, 2007. - 424 p. (Alma mater).
6. Fitzula M.M. Higher school pedagogy: Education. manual - K.: "Akademvydav", 2006. - 352 p. (Alma mater).

Educational content

5. Methods of mastering a course (educational component)

<i>No</i>	<i>Type of training session</i>	<i>Description of the training session</i>
<i>1</i>	<i>Lecture 1. Introduction to the engineering</i>	<i>The subject of the course "Engineering pedagogy", its content, purpose, tasks and connection with other sciences. The structure of the course and its main categories. Characteristics of scientific</i>

	<i>pedagogy study</i>	<p><i>research methods of engineering pedagogy. Engineering education formation and development. National Qualifications Framework. Levels and degrees of higher education. Basic concepts of the professional sphere - qualification, profession, specialty. Levels of professional activity. Basic principles of education in Ukraine.</i></p> <p><i>Tasks for self-study work:</i></p> <ol style="list-style-type: none"> <i>1. Determine the subject of the "Engineering Pedagogy" course, its purpose and tasks.</i> <i>2. Reveal the main categories of engineering pedagogy.</i> <i>3. Analyze research methods that exist in engineering pedagogy.</i>
2	<i>Seminar 1. Introduction to the study of engineering pedagogy</i>	<ol style="list-style-type: none"> <i>1. The subject of the "Engineering Pedagogy" course, its content, purpose, tasks and connection with other sciences.</i> <i>2. Characteristics of scientific research methods of engineering pedagogy.</i> <i>3. Formation and development of engineering education.</i> <i>4. National framework of qualifications, levels and degrees of higher education.</i> <i>5. Basic concepts of the professional sphere: qualification, profession, specialty.</i> <i>6. Levels of professional activity.</i> <p><i>Tasks for self-study work:</i></p> <ol style="list-style-type: none"> <i>1. Define and characterize the main categories of the "Engineering Pedagogy" course.</i> <i>2. Formulate the main principles of education in Ukraine.</i>
3	<i>Lecture 2. Psychological and didactic foundations of the learning process</i>	<p><i>The essence and relationship of the main concepts of the theory of learning: knowledge, skills, abilities, experience, competences, pedagogical process, didactic system, content of education and learning, methods and means of learning.</i></p> <p><i>Psychological model of the cognitive process. The essence of psychological processes of cognitive activity and their management in the learning process. The structure and content of the didactic process. Levels of learning, teaching and assimilation of educational information. B. Blum's taxonomy of educational goals.</i></p> <p><i>Laws and principles of didactics. The basic law of didactics and its practical significance. Basic principles in didactics: scientificity, systematicity, accessibility, awareness, connection of theory and practice, unity of the collective and individual, clarity, technology. Rules for practical implementation of the principles of didactics. Learning motives and motivation management.</i></p> <p><i>Tasks for self-study work:</i></p> <ol style="list-style-type: none"> <i>1. Describe the main concepts of learning theory.</i> <i>2. Reveal the psychological model of the cognitive process.</i> <i>3. Describe the basic laws and principles of didactics.</i>
4	<i>Seminar 2. Psychological and didactic foundations of the learning</i>	<ol style="list-style-type: none"> <i>1. The essence and relationship of the main concepts of the theory of learning: knowledge, skills, abilities, experience, competences, pedagogical process, didactic system, content of education and learning, methods and means of learning.</i>

	<i>process</i>	<p>2. <i>Psychological model of the cognitive process.</i></p> <p>3. <i>The essence of psychological processes of cognitive activity and their management in the learning process.</i></p> <p>4. <i>Structure and content of the didactic process.</i></p> <p>5. <i>Levels of learning, teaching and assimilation of educational information.</i></p> <p>6. <i>Laws and principles of didactics.</i></p> <p>7. <i>Learning motives and management of motivation.</i></p> <p><i>Tasks for self-study work:</i></p> <p>1. <i>Describe B. Blum's Taxonomy of educational goals.</i></p> <p>2. <i>Justify the rules for implementing the principles of didactics.</i></p> <p>3. <i>Reveal the role of motivation in the teacher's educational activities.</i></p>
5	<i>Lecture 3. Classification of types of educational activities and teaching methods</i>	<p><i>Organizational forms of the educational process and types of educational classes. Lectures, practical and seminar classes, laboratory work, individual training classes, consultations, individual tasks, independent work of students.</i></p> <p><i>The role and place of the lecture in a higher educational institution. Advantages and disadvantages of the lecture method of teaching. The main didactic tasks of the lecture. Types of lectures, their purpose and features. Basic didactic requirements for the lecture. Content and structure of the lecture. Management of cognitive activity of students. Methods of activation of cognitive activity. Incentives to activate students' cognitive activity. Methodology of reading a lecture. Lecturer data.</i></p> <p><i>Purpose, content and methodology of conducting practical classes in engineering courses. Types of seminar classes, their goals and tasks, methods of conducting. Didactics of laboratory classes and computer workshop Requirements for methodical provision of laboratory classes and computer workshop.</i></p> <p><i>Tasks for self-study work:</i></p> <p>1. <i>Describe the forms of the educational process and types of educational activities.</i></p> <p>2. <i>Reveal the role and place of the lecture in a higher educational institution.</i></p> <p>3. <i>Describe the purpose, content and methodology of conducting practical classes.</i></p>
6	<i>Seminar 3. Classification of types of educational activities and teaching methods</i>	<p>1. <i>Organizational forms of the educational process and types of educational activities.</i></p> <p>2. <i>The main didactic tasks of the lecture.</i></p> <p>3. <i>Types of lectures, their purpose and features.</i></p> <p>4. <i>Basic didactic requirements for the lecture. Content and structure of the lecture.</i></p> <p>5. <i>Methods of activating cognitive activity.</i></p> <p>6. <i>Purpose, content and methods of conducting practical classes in engineering courses.</i></p> <p>7. <i>Types of seminar classes, their goals and objectives, methods of conducting.</i></p> <p>8. <i>Didactics of laboratory classes and computer workshop. Requirements for methodical provision of laboratory classes and</i></p>

		<p>computer workshop.</p> <p>Tasks for self-study work:</p> <ol style="list-style-type: none"> 1. Formulate the advantages and disadvantages of the lecture method of teaching. 2. Describe the incentives for activating students' cognitive activity.
7	Lecture 4. Peculiarities of pedagogical communication	<p>Humanization of education as the basis of pedagogical communication. Functions of pedagogical communication. Content and structure of pedagogical communication in higher education. Styles of pedagogical communication. Teacher's culture and speech technique. Emotional and creative aspect of pedagogical communication.</p> <p>Tasks for self-study work:</p> <ol style="list-style-type: none"> 1. Describe the functions of pedagogical communication, its content and structure. 2. Describe the styles of pedagogical communication. 3. Reveal the essence of the teacher's culture and speech technique.
8	Seminar 4. Peculiarities of pedagogical communication	<ol style="list-style-type: none"> 1. Functions of pedagogical communication. 2. Content and structure of pedagogical communication in higher education. 3. Styles of pedagogical communication. 4. Teacher's culture and speech technique. <p>Tasks for self-study work:</p> <ol style="list-style-type: none"> 1. Reveal how the humanization of education affects pedagogical communication. 2. Describe the emotional and creative aspect of pedagogical communication. 3. Describe the communication features of the future teacher-engineer.
9	Lecture 5. Peculiarities of educating future engineers	<p>The essence of requirements for social and personal competences of a modern engineer. The essence of the main principles and methods of forming social and personal competences of students. Psychological features of the teacher's understanding of the student's personality. Pedagogical tact. Methods of resolving pedagogical conflicts.</p> <p>Tasks for self-study work:</p> <ol style="list-style-type: none"> 1. Describe the essence of the requirements and principles of the formation of social and personal competences of students. 2. Describe the essence of the requirements for pre-social and personal competencies of a modern engineer. 3. Reveal the essence of the methods of resolving pedagogical conflicts.
10	Seminar 5. Peculiarities of educating future engineers	<ol style="list-style-type: none"> 1. The essence of requirements for social and personal competencies of a modern engineer. 2. The essence of the basic principles of the formation of social and personal competences of students. 3. The essence of the main methods of forming social and personal

		<p>competences of students.</p> <p>3. Pedagogical tact.</p> <p>4. Methods of resolving pedagogical conflicts.</p> <p>Tasks for self-study work:</p> <p>1. Describe the psychological features of the teacher's understanding of the student's personality.</p> <p>2. Describe the main directions of education in a technical university.</p>
11	Lecture 6. Methodological support of the educational process	<p>The composition of educational and methodical documentation on the specialty. Purpose and structure of study and work curricula. The composition of educational and methodical documentation on the educational course. Requirements for the structure and content of the curriculum of the course and the work program of the credit module.</p> <p>Tasks for self-study work</p> <p>1. Describe the structure of educational and methodical documentation for the specialty.</p> <p>2. Reveal the essence of the composition of educational and methodological documentation for the course.</p> <p>3. Describe the requirements for the structure and content of the educational course program and work program.</p>
12	Seminar 6. Methodological support of the educational process	<p>1. Compilation of educational and methodical documentation for the specialty.</p> <p>2. Purpose and structure of study and work curricula.</p> <p>3. Compilation of educational and methodical documentation for the educational course.</p> <p>4. Requirements for the structure and content of the educational course program.</p> <p>5. Requirements for the structure and content of the work program of the credit module.</p> <p>Tasks for self-study work</p> <p>1. List the educational and methodical documentation of the specialty and describe it.</p> <p>2. List the educational and methodical documentation of the academic course and describe it.</p>
thirteen	Lecture 7. Education quality assurance system and control of learning outcomes	<p>Purpose and composition of the education quality assurance system. System of higher education standards. European qualification framework EUR-ACE (European engineer). Structure and content and standard of higher education and educational program.</p> <p>The main characteristics of the education quality control system. Goals and tasks of quality control of education. The main factors affecting the quality of education. Object and subject of control. Requirements for the control system. Validity, reliability, validity and control effectiveness. Types and levels of control, their tasks, goals and functions. Forms of control.</p> <p>Problems of pedagogical diagnostics. Methods of pedagogical qualimetry, types of qualimetric scales. The problem of choosing scale intervals. Comparative analysis of assessment systems,</p>

		<p><i>features of the ECTS system. Requirements for control tasks. Use of B. Blum's taxonomy in the development of control tasks. The complexity and laboriousness of the task. Duration of control. The essence of test control. Criteria and methods of processing control results.</i></p> <p><i>Tasks for self-study work</i></p> <ol style="list-style-type: none"> <i>1. Reveal the purpose and composition of the education quality assurance system.</i> <i>2. Describe the main characteristics of the education quality control system.</i> <i>3. Describe the problems of pedagogical diagnostics.</i>
14	<p><i>Workshop 7. Education quality assurance system and control of learning outcomes</i></p>	<ol style="list-style-type: none"> <i>1. Purpose and composition of the education quality assurance system.</i> <i>2. System of higher education standards.</i> <i>3. Structure and content and standard of higher education and educational program.</i> <i>4. Main characteristics of the education quality control system. Goals and tasks of quality control of education.</i> <i>5. Object and subject of control. Requirements for the control system.</i> <i>6. Types and levels of control, their tasks, goals and functions.</i> <i>7. Forms of control.</i> <i>9. Methods of pedagogical qualimetry, types of qualimetric scales.</i> <i>10. Requirements for control tasks and the essence of test control.</i> <p><i>Tasks for self-study work</i></p> <ol style="list-style-type: none"> <i>1. Describe the main factors affecting the quality of education.</i> <i>2. Specify what depends on the validity, reliability, reliability and effectiveness of control.</i> <i>3. Describe the problems of pedagogical diagnostics.</i> <i>4. Carry out a comparative analysis of evaluation systems.</i> <i>5. Describe the use of B. Blum's taxonomy in the development of control tasks.</i> <i>6. Describe how the complexity and laboriousness of the task manifests itself.</i>
15	<p><i>Lecture 8. New learning technologies</i></p>	<p><i>General characteristics of pedagogical technologies. Credit-modular organization of the educational process. Modular - rating systems for evaluating the quality of education. Game methods of learning. The main features of game methods. Peculiarities of organizing business games, role playing, brainstorming, game design. Basic principles of building a business game. Basic principles of distance learning technologies. Didactic requirements for electronic manuals.</i></p> <p><i>Tasks for self-study work</i></p> <ol style="list-style-type: none"> <i>1. Describe the general characteristics of pedagogical technologies.</i> <i>2. Describe game-based learning methods.</i> <i>3. Reveal the main principles of distance learning technologies.</i>
16	<p><i>Workshop 8. New learning</i></p>	<ol style="list-style-type: none"> <i>1. General characteristics of pedagogical technologies.</i> <i>2. Credit-modular organization of the educational process.</i>

	<i>technologies</i>	<p>3. <i>Game methods of learning.</i></p> <p>4. <i>Main characteristics of game methods.</i></p> <p>5. <i>Peculiarities of organizing business games, role playing, brainstorming, game design.</i></p> <p>6. <i>Basic principles of building a business game.</i></p> <p>7. <i>Basic principles of distance learning technologies.</i></p> <p><i>Tasks for self-study work</i></p> <p>1. <i>Describe the main modern teaching methods.</i></p> <p>2. <i>Describe the advantages and disadvantages of new learning technologies.</i></p> <p>3. <i>Specify the main requirements for electronic manuals.</i></p>
17	<i>Lecture 9. Pedagogical culture of a higher school teacher</i>	<p><i>Basics of formation of pedagogical culture. Components of pedagogical culture. The essence of pedagogical professionalism.</i></p> <p><i>Tasks for self-study work</i></p> <p>1. <i>Reveal the basics of the formation of pedagogical culture.</i></p> <p>2. <i>Describe the components of pedagogical culture</i></p> <p>3. <i>Describe the essence of pedagogical professionalism.</i></p>
18	<i>Seminar 9. Pedagogical culture of a higher school teacher</i>	<p>1. <i>The essence of pedagogical culture.</i></p> <p>2. <i>Basics of pedagogical culture formation.</i></p> <p>3. <i>Components of pedagogical culture.</i></p> <p>4. <i>The essence of pedagogical professionalism.</i></p> <p><i>Tasks for self-study work</i></p> <p>1. <i>Explain the meaning of the term "Pedagogical culture".</i></p> <p>2. <i>Describe what the formation of pedagogical culture depends on.</i></p> <p>3. <i>Make a psychological portrait of a teacher of a higher school.</i></p>

6. Self-study student's work

The course "Engineering pedagogy" is based on independent preparation for seminar classes on theoretical and practical topics.

<i>No. z/p</i>	<i>The name of the topic submitted for independent processing</i>	<i>Number of hours</i>	<i>literature</i>
1	<i>Preparation for seminars</i>	18	1-5
2	<i>Preparation for modular test</i>	4	1-5
3	<i>Preparation for the test</i>	2	1-5

Policy of course (educational component)

Attendance and tasks performance

Attending lectures is not evaluated, but is desirable, as the educational material is presented in an accessible form and there is an opportunity to discuss debatable issues and clarify unclear points. It will be difficult for a student to properly prepare for a practical lesson, to complete a practical task, if he misses lectures. However, it is not necessary to make up missed lectures.

Student's active participation during seminar (practical) classes is mandatory. The student's rating will largely be formed by the results of his work in seminar classes. Each missed seminar session (regardless of the reasons for the absence) lowers the final rating of the student in the course. In case of missing a seminar class, the student must have studied the topics, as well as completed all the tasks. The control of the student's knowledge (understanding) of the missed topics (fulfillment of tasks) will take place during communication with the teacher according to the consultation schedule, which can be found on the website of the Department of Psychology and Pedagogy.

Points are not given for attendance at seminar classes. At the seminar, the student can use the written notes prepared by him on the issues of the topic of the lesson (or provided by the task), but it is not necessary to express a position by reading from a sheet of paper or gadgets. Answering the teacher's questions while reading from the screen of a smartphone, laptop or from a textbook is also not worth it. This characterizes the student's level of training not in the best way.

Forms of work

Lectures, seminar classes. The topics of the lectures are covered in the course syllabus. Questions from students to the teacher during the lecture are welcome. Dialogue between the student and the teacher at the lecture is allowed and welcomed. At seminar classes, students focus their attention on the analysis of socio-psychological phenomena in society and master active methods of discussion management.

University policy

Academic integrity

The main types of academic responsibility are established by the Law of Ukraine "On Education". According to Part 6 of Article 42, the main types of academic responsibility of education seekers include: repeated assessment (test, exam, credit, etc.); repeating the corresponding educational component of the educational program; deduction from the educational institution; deprivation of an academic scholarship; deprivation of educational benefits provided by the educational institution.

The policy, standards and procedures for compliance with academic integrity are contained in the following regulatory documents of Igor Sikorsky Kyiv Polytechnic Institute, published on the University's website: Code of honor of Igor Sikorsky Kyiv Polytechnic Institute <https://kpi.ua/files/honorcode.pdf>, Regulations on the academic plagiarism prevention system <https://rb.gy/agihij>, as well as normative and legal documents, official recommendations, orders and orders, sociological studies of Igor Sikorsky Kyiv Polytechnic Institute, methodical materials, educational courses <https://kpi.ua/academic-integrity>.

Norms of ethical behavior

Standards of students and employees ethical behavior are defined in Chapter 2 of the Code of Honor of the National Technical University of Ukraine "Ihor Sikorskyi Kyiv Polytechnic Institute". More details: <https://kpi.ua/code>, as well as in the Regulations on the Commission on Ethics and Academic Integrity of NTUU "KPI" https://data.kpi.ua/sites/default/files/files/2015_1-140a1.pdf

7. Monitoring and grading policy

Current control: survey on the topic of the lesson, tasks performance.

Calendar control: is conducted twice a semester as a monitoring of the current state of syllabus requirements fulfillment.

Semester control: credit.

Evaluation and control measures

The student's course rating consists of points obtained for:

- 1. work in seminar (practical) classes (answers, solving tasks and supplementing the answers of other students in the discussion process);*
- 2. compilation of a modular test.*

The student will receive the highest rating if he takes an active part in the seminar (practical) classes, mostly provides complete and reasoned answers, logically explains them, expresses his own position on the debated issues. Missed classes, inaccuracies, incompleteness, mistakes in answers cause a decrease in the student's rating.

The teacher evaluates the student's work in each seminar session, but the specific final number of points for the work in the seminar sessions is assigned by the teacher during the first and second stages of the intermediate certification - in the eighth and fourteenth weeks of study, respectively. The student's rating as of the 8th week (based on the results of work in 6-8 practical classes) and the 14th week (based on the results of work in the next 6-8 practical classes) of training is communicated to the student in class or in the electronic campus personal office.

The modular test consists of 46 test tasks reflecting the content of the entire course. Modular test is conducted with the help of Google tests in the last (penultimate) lecture. Access to modular test is provided to students only during the lecture. It is not possible to rearrange the modular test.

The detailed criteria for evaluating the student's learning outcomes are defined in the regulation on evaluation and control measures in the course and are presented in Appendix 1.

The student can appeal the teacher's assessment by submitting a corresponding complaint to the teacher no later than the next day after the student has been informed of the teacher's assessment. The complaint will be processed according to the procedures established by the university.

Conditions for semester control admission: enrollment of all planned syllabus tasks.

8. Additional information on the course (educational component)

The study of the course "Engineering pedagogy" is conducted according to the existing method of organizing the educational process in institutions of higher education, which provides for the specific weight of independent work of students. References to the list of primary and secondary literature are given for each topic, which does not exclude the possibility for students to expand this list independently, in agreement with the teacher.

Lectures are conducted using multimedia presentations (subject to conditions in the classroom). While working at the lecture, the student should take notes on the main concepts, signs, classifications, definitions, and algorithms that the teacher will talk about. If the student listens carefully, records the relevant material, then reads this text, applies it when solving a task or preparing for a practical lesson. If, after that, the student presents his justified position (opinion), critically evaluates the positions (opinions) of other students, asks questions to the teacher and students - the amount of educational material he has learned and the depth of his understanding will increase many times.

When preparing for a seminar class, the student must study the lecture material of a certain topic, it is desirable to get acquainted with additional resources on the network. When questions arise, unclear provisions are identified, it is necessary to discuss them with the teacher. At a seminar class, even a well-prepared student should not remain a passive observer, but actively participate in the discussion of the issue. If the student has not familiarized himself with the educational material, he should listen more carefully to the speakers, and thanks to the information received, try to compensate for the shortcomings of preparation for the class. Do not refuse to answer the teacher's questions. Even if the student does not know the answer, it is advisable to try to answer, express his opinion based on his own knowledge, experience, logic of the question, etc. At the same time, one should not be afraid to make a mistake - one of the important tasks of studying humanitarian courses is to develop the ability to think logically and express one's own opinions accordingly. However, it is worth remembering that ignorance of the material of the course is a significant drawback of the student's work and will negatively affect his overall rating. A responsible attitude to the preparation for each seminar session allows not only to learn the educational material correctly, but also to save effort when passing the semester control.

Distance Learning

Synchronous distance learning is possible using video conferencing platforms and an educational platform for distance learning at the university.

Inclusive education

It is allowed

Syllabus of the course

Is designed by Ph.D., teacher of Psychology and Pedagogy Department Onipko Zoryana Serhiivna

Adopted by Computer Systems Software Department (protocol № 12 from 26.04.23)

Approved by the Faculty Board of Methodology (protocol № 10 from 26.05.23)

A rating system for evaluating learning outcomes

- 1) work in seminar (practical) classes (answers, solving problems and supplementing the answers of other students in the discussion process);
- 2) compilation of a modular test.

System of rating (weighted) points and evaluation criteria:

1. Work at seminar (practical) classes the maximum number of points is 54 (the number of points in 1 lesson is 6):

active participation in the lesson; providing a full and reasoned, logically presented report, answer, expressing one's own position on debatable issues or completely correct solutions to tasks with appropriate justification, in combined with appropriate additions to the answers of other students in the discussion process	5-6
active participation in the lesson; providing correct answers or correctly solving tasks with minor inaccuracies, violations of the logic of presentation answers or reasoning when solving a problem	3-4
providing answers with numerically significant errors or solving the problem with gross mistakes, problem solving without justification	1-2

2. Compilation of a modular test the maximum number of points is 46 (the maximum number of points for 1 test task is 1):

all test tasks were completed correctly	46
half of the test tasks were completed correctly	23
all test tasks were not completed correctly	0

Calculation of the rating scale (R):

The sum of the weighted points of control measures during the semester is: $RS = 54 + 46 = 100$ points

Students who scored the required number of points during the semester ($RD > 0.6R$) have the opportunity to:

- a) receive a credit score (credit) by the so-called "automatic machine" in accordance with the scored rating;
- b) to complete a credit test in order to increase the grade.

At the same time, the previous rating of the student in the course is canceled and he receives an RЖ grade only based on the results of the credit test.

The list of questions for the assessment test is given in Appendix 2.

Students who have not completed all tasks prescribed by the course program are not allowed to be counted.

Final test work is evaluated on a scale of 100 points. The first question is evaluated with 34 points, the second and third with 33 points.

Each question is evaluated according to the evaluation system:

"**perfectly**", complete answer (at least 90% of the required information) - 34 (33) ...30 points;

"**fine**", sufficiently complete answer (at least 75% of the required information, or minor inaccuracies) - 29...25 points;

"**satisfactorily**", incomplete answer (at least 60% of the required information and some errors) - 24...20 points;

"**unsatisfactorily**", unsatisfactory answer - 0 points.

In order for the student to receive the appropriate grades (ECTS and traditional), his rating grade (RD) is translated according to the table:

<i>RD</i>	ECTS assessment	The assessment is traditional
95 - 100	perfectly	Perfectly
85-94	very good	Fine
75-84	fine	
65-74	satisfactorily	Satisfactorily
60-64	sufficient (meets minimum criteria)	
<i>RD</i> < 60	unsatisfactorily	Unsatisfactorily

A list of questions for the assessment test

1. Explain the meaning of the concept of "education" and formulate the main goals of education.
2. Analyze the main prerequisites for reforming higher education.
3. Formulate the main goals and analyze the main directions of reforming higher education in Ukraine.
4. Discover the main goals and ideas of the Bologna process.
5. Discover the purpose and essence of the European and national qualifications frameworks.
6. Will analyze the implementation of the provisions of the Bologna Process in higher education of Ukraine.
8. Justify the main principles of education in Ukraine.
9. Discover the essence of levels and degrees of higher education in Ukraine.
10. Define the following concepts: "educational level", "profession", "specialty", "specialization" and "qualification".
11. Discover the types of higher education institutions in Ukraine.
12. Reveal the main scientific tasks of higher school pedagogy and pedagogical psychology.
- thirteen. Reveal the essence of the concepts: "knowledge", "skills" and "skills" and explain their dialectical relationship.
14. Define the concepts: "educational process", "content of education" and "content of learning".
15. Reveal the meaning of the concepts: "learning methods", "learning tools", "forms of learning organization".
16. Reveal the essence of the stages of the didactic process.
17. Reveal the essence of two types of psychological activity and their significance for pedagogical practice.
18. Reveal the essence and tasks of B. Blum's taxonomy of educational goals.
19. Formulate the basic law of didactics.
20. Reveal the essence of the main principles of didactics.
21. Justify the teacher's tasks and methods of managing students' motivation.
22. Justify the advantages and disadvantages of the lecture as a form of educational organization.
23. Reveal the main didactic requirements for the content and structure of the lecture.
24. Reveal the principles of constructing a problem lecture.
25. Reveal the essence of the main methods of activating students' cognitive activity in lectures.
26. Define the seminar class and its main types.
27. Define practical and laboratory classes.
28. Give recommendations on the use of certain principles of didactics when conducting educational classes of various types.
29. Reveal the composition and purpose of higher education standards.
30. Reveal the purpose and structure of the higher education standard and educational program.
31. Explain the purpose and composition of the education quality assurance system.
32. Open up storage and appointment of the cathedral methodical software in specialty and course.
33. Formulate the purpose and main requirements for educational and work curricula.
34. Analyze the main factors affecting the quality of education.
35. Reveal the main requirements for the education quality control system, justify the ways of ensuring them.
36. Reveal the essence of the main types of control, justify their goals, functions and tasks.
37. Will analyze the advantages and disadvantages of various forms of quality control of student training.
38. Define the concepts of "assessment" and "mark", justify their main functions.
39. Reveal the essence of the requirements for control tasks, justify the ways of ensuring them.
40. Justify ways to choose the complexity, laboriousness and duration of control.

41. Define the term "learning technology".
42. Discover the structure and principles of new learning technologies.
44. Justify the goals and principles of building a rating system for evaluating learning success.
45. Reveal the essence of modular learning technology, its advantages and implementation conditions.
46. Discover the essence of game-based learning methods.
47. Formulate the main principles of distance education and training.
48. Reveal the types and levels of pedagogical communication.
49. Reveal the essenceemotional and creative aspect of pedagogical communication.
50. Unravel the essence and structure of the pedagogical tact.