Ministry of Education and Science of Ukraine
Sumy National Agrarian University
Faculty of Engineering and Technology
Department of Technical Service

Work program (syllabus) of the educational component

OK 13 – Practice in Teaching

(mandatory)

Implemented within the educational program Industrial Machinery Engineering
(name)

in specialty 133 "Industrial machinery engineering"
(code, name)

third (educational and scientific level) level of higher education

Sumy – 2022

Developers: _____ , Tarelnyk V.B., Doctor of Technical Sciences, Professor, Head of the Department of Technical Sciences

(signature) (surname, initials) (academic degree and title, position)

Reviewed, approved and ratified at a meeting of the Technical Service Department (name of the department)	protocol of August 30, 2022 No. 1
	Head departments _____ (signature) Tarelnyk V.B. (last name, initials)

Agreed:

Guarantor of the educational program _____ V.B. Tarelnyk
(signature) (full name)

Dean of the Faculty _____ V.M. Zubko
(signature) (full name)

Review of the work program (attached) provided by: _____ V.M. Zubko
(Full name)

_____ M.Yu.Dumanchuk
(Full name)

Methodologist of the Department of Educational Quality, licensing and accreditation _____ N.M. Baranik
(signature)

Registered in the electronic database: date: 03.09 2022.

Information on reviewing the work program (syllabus):

Educational the year in which are introduced changes	Number of the appendix to the work program with a description of the changes	Changes reviewed and approved		
		Date and number minutes of the meeting departments	Head of the Department	Guarantor educational programs

1. **GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT**

1.	Name CC	Practice in Teaching			
2.	Faculty/department	Faculty of Engineering and Technology/Department of Technical Service			
3.	Status CC	Mandatory			
4.	Program/Specialty (programs)	Educational and scientific program "Industrial mechanical engineering" in specialty 133 "Industrial mechanical engineering"			
5.	CC can be offered for (to be filled in for selective CCs)				
6.	NQF level	Level 8			
7.	Semester and duration study	Daily 4 semester, 4 weeks			
8.	Number of ECTS credits	4			
9.	Total hours and their distribution	Contact work (classes)			Independent work
		Lectures	Practical / seminar	Laboratory	
		Daily -	Daily 20		Daily 100
10.	Language of instruction	Ukrainian, English			
11.	Teacher/ Coordinator educational component	Tarelnyk Vyacheslav Borysovych, Doctor of Technical Sciences, Professor, Head of the Department of Technical Service Consultation hours – every Monday from 10:00 to 12:00, room 302m			
11.1	Contact information	viacheclav.tarelnyk@snau.edu.ua			
12.	General description of the educational component	When preparing doctors of philosophy in the field of mechanical engineering, it is important to consolidate the acquired theoretical knowledge and practical improvement of pedagogical competencies, which occurs during pedagogical practice. During pedagogical practice, applicants have the opportunity to master modern methods, forms and means of teaching, to form professional skills and abilities based on the acquired knowledge in basic psychological and pedagogical disciplines for solving specific educational tasks when teaching engineering disciplines in higher educational institutions, to cultivate the need to systematically update their knowledge and creatively apply it in practical activities.			
13.	Purpose of the educational component	It consists in deepening and consolidating the knowledge obtained by postgraduate students on the organization and forms of implementation of the educational process in modern conditions, its scientific, educational, methodological and regulatory support, the formation of skills and abilities to process scientific and information sources when preparing classes, the application of active methods of teaching professionally oriented disciplines in the specialty 133 Industrial Mechanical Engineering			
14.	Prerequisites for studying CC, connection with other educational components of OP	The discipline is based on CC8 "Organization and methodology of conducting training sessions"			
15.	Academic Integrity Policy	If a candidate submits another candidate's work as their own, such work is canceled and retaken. In case of cheating, retake the corresponding assignment. In case of using text borrowings without proper citation (academic			

		plagiarism), the work will be canceled.
16.	Link to the course in Moodle system	https://cdn.snau.edu.ua/moodle/course/view.php?id=4988

2. LEARNING OUTCOMES BY EDUCATIONAL COMPONENT AND THEIR RELATIONSHIP WITH PROGRAM LEARNING OUTCOMES

Learning outcomes for CC: After studying the educational component, the applicant is expected to be able to...	Program learning outcomes that the OC aims to achieve (indicate the number according to the numbering given in the OP)	How is the LOA assessed?
	PLO10	
LOA 1develop and implement an educational component within their specialty, determine the goals and objectives of various types of training sessions, select appropriate content, forms, methods and means of educational interaction with higher education applicants, taking into account knowledge from the specialty in teaching, and integrate them into the discipline	X	Educational component program draft
LOA 2develop an effective teaching-learning and assessment strategy in accordance with the principle of constructive engagement, combining current research on learning, teaching, and assessment with one's own experience as a teacher and as a student	X	Educational component program draft.+ peer evaluation
LOA 3prepare and conduct a lecture, practical (seminar) class on financial disciplines for undergraduate students using various teaching methods and forms of reflection,	X	Simulation, peer evaluation, practice report
LOA 4analyze the learning process, including evaluating one's teaching in accordance with educational goals, independently, creatively and proactively make decisions regarding the problems of modern education, and determine and justify optimal teaching methods using modern information technologies and innovative techniques in accordance with the tasks facing the teacher in the educational process	X	Practice report, peer evaluation
LOA 5work in purposeful interaction with students, using interactive methods according to the situation, as well as collaborate with various stakeholders of the educational process	X	Feedback form

PLO 10. Organize and implement the educational process in the field of industrial mechanical engineering, its scientific, educational, methodological and regulatory support, develop and teach special academic disciplines in higher education institutions.

3. CONTENT OF THE EDUCATIONAL COMPONENT (COURSE PROGRAM)

Topic. List of issues to be addressed within the topic	Distribution within the overall time budget				Recommended reading
	Classroom work			Independent work	
	Lec	PC	Lab		
Topic 1. The importance and features of teaching professional disciplines. Methods of teaching professional disciplines as a science and an educational discipline. Educational and methodological support for teaching professional disciplines. Varieties of teaching methods in studying professional disciplines. Innovative teaching technologies in financial education.		2		12	[1-16], [19], [24-26]
Topic 2. Practice of preparing and delivering lectures on professional disciplines. Lecture - the main form of teaching, its main functions and role. Types of lecture classes, methodological approaches to the preparation of each type of lecture. The main stages of preparing a lecture, their characteristics. The structure of the lecture: plan, introduction, main and final parts, their characteristics. Lecture outline, basic requirements for its development. The logic of the relationship of the main issues of the topic. Work on the text of the lecture before its delivery.		2		12	[1-16], [24-26]
Topic 3 Practice of conducting lecture classes. Introduction, as the most important stage of the lecture. Methodological approaches to presenting the main part of the lecture. Methodological style of the teacher, characteristics. Taking notes, as one of the most important means of concentrating students' attention. The final part of the lecture. The teacher's work after the lecture		2		12	[1-16], [24-26]
Topic 4. Methodology for conducting seminars and practical classes in professional disciplines. Practical classes, methodological approaches to their conduct. Seminar classes, their main functions and types. Methodology for their conduct. Discussion, methodological approaches to each type of discussion. Analysis of specific engineering problems as one of the methods of activating learning.		2		12	[1-16], [24-26]
Topic 5. Methods of activating the educational process. Business game as a teaching method. The role of active teaching methods in modern education. Principles of active learning. Methods of activating lecture classes. Methods of activating learning in seminar and practical classes. Features of business game compared to other methods of active learning. Stages and principles of conducting a business game. Methodology of conducting a business game		4		14	[1-16], [24-26]
Topic 6. Organization of independent work of students. Organization of independent work of students, the need to combine it with other forms of the educational process. Forms and methods of organizing independent work. Preparation for lectures, practical and seminar classes. Preparation for current express control (on each topic), boundary, when knowledge from 2-3 topics is assessed, and final. System of self-control, its methodological support.		4		12	[1-16], [24-26]

Topic 7. Remote teaching: models, technology, prospects. The essence and characteristics of distance learning. Organizational and methodological models of distance learning. The use of smart technologies in the modern educational process. Distance learning as a means of stimulating self-education		2		14	[1-16], [22-26]
Topic 8. Monitoring and assessing students' knowledge in professional disciplines. Control as a methodological problem. Components of student knowledge control. Functions of control and assessment of knowledge. Forms of control of learning success		2		12	[1-16], [22-26]
Together		**20**		**100**	

4. **TEACHING AND LEARNING METHODS**

LOA	**Teaching methods**(work that will be carried out by the teacher during classroom lessons, consultations)	**Number of hours**	**Teaching methods**(what types of learning activities should the student perform independently)	**Number of hours**
LOA 1develop and implement an educational component within their specialty, determine the goals and objectives of various types of training sessions, select appropriate content, forms, methods and means of educational interaction with higher education applicants, taking into account knowledge from the specialty in teaching, and integrate them into the discipline	group discussion, explanation, counseling	4	Designing training sessions, independent work with scientific and methodological literature,	18
LOA 2develop an effective teaching-learning and assessment strategy in accordance with the principle of constructive engagement, combining current research on learning, teaching, and assessment with one's own experience as a teacher and as a student	Thematic discussion, round table, analysis of specific pedagogical learning situations through the action of teacher consultation	4	Study of theoretical material, personalized learning,	22
LOA 3prepare and conduct a lecture, practical (seminar) class on financial disciplines for undergraduate students using various teaching methods and forms of reflection,	simulation, group work, teacher consultations, peer to peer learning	4	Reading (studying theoretical material), learning through research, conducting training sessions	22
LOA 4analyze the learning process, including evaluating one's teaching in accordance with educational goals, independently, creatively and proactively make decisions regarding the problems of modern education, and determine and justify optimal teaching methods using modern information technologies and innovative techniques in accordance with the tasks facing the teacher in the educational process	group discussion, explanation, counseling	4	Reading (studying theoretical material), learning through research, preparing a report	22
LOA 5work in purposeful interaction	discussions, talks, round	4	Reading (studying	16

with students, using interactive methods according to the situation, as well as collaborate with various stakeholders of the educational process	tables		theoretical material), learning through research	
Total hours		20		100

5. EVALUATION BY EDUCATIONAL COMPONENT

5.1. Diagnostic assessment (indicated as needed)

5.2. Summative assessment:

5.2.1. To assess the expected learning outcomes, there are

No.	Summative assessment methods	Points / Weight in the overall score	Date of compilation
1.	Educational component program draft	30 points /30%	1st week
2.	Simulation, peer evaluation	15 points /15%	during practice
3.	Feedback form	20 points / 20%	3rd week
4.	Internship report	35 points / 35%	3rd week

5.2.2. Evaluation criteria

Component	**Unsatisfactorily**	**Satisfactorily**	**Good**	**Perfectly**
Educational component program draft	*<18 points*	*18-22 points*	*23-26 points*	*27-30 points*
	Not all components of the program are developed and/or the information is presented in an unstructured manner, there is no understanding of the logical structure of the educational component, and the results are presented in an inappropriate format.	All components are present without detailed justification. Learning outcomes are not always formulated in accordance with the SMART principle, information on teaching methods is not structured, compliance with the principle of constructive coordination is not demonstrated. The draft program is presented in the appropriate format.	The learning outcomes are formulated in accordance with the SMSRT principle, aligned with teaching, learning and assessment methods. The results are presented in an appropriate format.	The learning outcomes are formulated in accordance with the SMART principle, aligned with teaching, learning and assessment methods. The program is based on benchmarking, contains innovative teaching and learning practices, which are the result of the applicant's research. The results are presented in an appropriate format.
Simulation + peer evaluation	*<9 points*	*9-11 points*	*12-13 points*	*14-15 points*
	Students do not participate in group discussions, do not provide feedback, and do not express an opinion on the problem or the speeches of others.	Applicants participate in a group discussion, feedback is not structured, no recommendations are provided. During peer evaluation, the evaluation was not given according to the criteria.	Applicants participate in simulations, thoroughly formulate recommendations and proposals. During peer evaluation, assessments are given clearly according to the criteria.	Applicants participate in simulations, thoroughly formulate recommendations and proposals. During peer evaluation, assessments are given clearly according to the criteria.
Feedback form	*0 points*	*1-9 points*	*10-19 points*	*20 points*
	The assignment was not completed within the deadline set by the instructor or was completed in violation of the norms of academic integrity.	The task was not prepared on time. Presentation of the assessment criteria in a way that does not reveal its content and results	The task was prepared on time. The assessment criteria were presented in the appropriate format.	The task is prepared on time. Presenting research results in a way that is most appropriate for the circumstances, using a variety of forms of information presentation.
Analytical review with presentation	*<18 points*	*18-25 points*	*26-31 points*	*32-35 points*
	Partially completed work, design does not meet	The work is completed in full; the postgraduate student demonstrates	The work is completed in full, the postgraduate student reasonably presents the	The work is completed in full; the postgraduate student freely, independently and

(credit)	requirements	elementary knowledge of individual provisions of pedagogical practice, compares, summarizes and analyzes information, processes and interprets data, obtained results, the design of the work partially meets the requirements	results of the practice, analyzes, synthesizes, summarizes and evaluates information, processes and logically interprets the data, the results obtained, the design of the text, literature meets the requirements	with good reasoning presents the results of the practice, deeply and comprehensively reveals its content, searches, analyzes, synthesizes, summarizes and critically evaluates information, the design of the text and literature meets the requirements

5.3. Formative assessment:

To assess current progress in learning and understand areas for further improvement,

No.	Elements of formative assessment	Date
1	Oral feedback on the internship report	after the presentation
2	Verbal feedback from the teacher while working on the project; written feedback on the project from the teacher and fellow applicants	during classes, within 2 weeks after assembly
3	Verbal feedback from teacher and students	during classes

Within the discipline, peer assessment (peer assessment) is provided as an element of formative assessment (after the presentation of the practice report and the project) and summative assessment - out of 35 points for research work, 25 points can be assigned by the teacher, 10 points by the applicant-reviewer. This approach allows applicants to develop assessment, self-assessment, and responsibility skills, which is critically important for them as future teachers.

6. LEARNING RESOURCES (LITERATURE)

6.1. Main sources:

1. Artemova L.V. Pedagogy and methodology of higher education - Kyiv: Condor, 2012. - 272 p.
2. Academic integrity: problems of compliance and priorities of dissemination among young scientists: monograph / edited by N. G. Sorokina, A. E. Artyukhova, I. O. Degtyareva. Dnipro: DRIDU NADU, 2017. 169 p.
3. Baranova N.P. Trainings for teachers on pedagogical skills. Kh.: Publishing house group "Osnova", 2009. 159 p.
4. Gin V.I. Techniques of pedagogical technology. Kh.: Vesta: Publishing house "Ranok", 2007. 176 p.
5. Golovenkin, V. P. Pedagogy of higher education: textbook; 2nd ed., revised and supplemented. Kyiv: Igor Sikorsky Kyiv Polytechnic Institute, 2019. 290 p. URL:https://ela.kpi.ua/handle/123456789/29032
6. Kovalchuk L.O. Fundamentals of pedagogical skills: Textbook. Lviv: Publishing Center of Ivan Franko National University of Lviv, 2007. 608 p.
7. Marchenko O.G. Fundamentals of pedagogical skills. Kh.: Publishing house group "Osnova", 2009. 112 p.
8. Pedagogical skills of a teacher: Textbook / Edited by prof. V.M. Grineva, S.T. Zolotukhina. 2nd ed., corrected and supplemented. Kharkiv: "OVS", 2006. 224 p.
9. Pedagogical skills: Textbook / I. A. Zyazyun, L. V. Kramuschenko, I. F. Krivonos and others; Ed. I. A. Zyazyun. 2nd ed. supplemented and revised. K.: Vyscha pic., 2008. 422 p.
10. Prevention of emotional burnout syndrome of teachers / compiled by A.G. Derbenyova, A.V. Kuntsevskaya. Kh.: Publishing house group "Osnova", 2009. 223 p.
11. Strelnikov V. Components of professional competence of a higher school teacher. Humanitarian Bulletin. 2013. No. 28. Pp. 278-285.
12. Teslyuk V.M., Luzan P.G., Shovkun L.M. Fundamentals of pedagogical skills: a textbook. Kyiv: DAKKiM, 2010. 244 p.

13. Turishcheva L.V. Creativity in pedagogical activity of Kh.: Publishing house group "Osnova", 2010. 128 p.
14. Fedorchuk V.V. Fundamentals of pedagogical skills: teaching and methodical manual. Kamianets-Podilskyi: 2008. 140 p.
15. Shevchenko O.A., Khozratkulova I.A. Trainings for the professional development of young teachers. Kh.: Publishing house group "Osnova", 2010. 12 p.
16. Chernilevsky D. V. Pedagogy of higher education: textbook / [D. V. Chernilevsky, I. S. Gamretsky, O. A. Zarichansky, I. M. Lutsky, O. V. Pshenychnyuk]; edited by D. V. Chernilevsky. Vinnytsia: AMSKP, Globus-Press, 2010. 408 p.

6.2. Additional sources:

17. On Higher Education: Law of Ukraine dated 01.07.2014 No. 1556-VII. URL:https://zakon.rada.gov.ua/laws/show/1556-18
18. On approval and implementation of the Regulations on pedagogical practice of candidates for the degree of Doctor of Philosophy at Sumy National Agrarian University. Order of the Rector of Sumy National Agrarian University No. 414-k dated 28.10. 2020 URL:http://science.snau.edu.ua/wp-content/uploads/2020/10/PedPracticaAsp.pdf
19. Regulations on pedagogical (teaching) practice of candidates for the degree of Doctor of Philosophy at Sumy National Agrarian University. Order of the Rector of Sumy National Agrarian University No. 414-k dated 28.10.2020 URL:http://science.snau.edu.ua/wp-content/uploads/2020/10/PedPracticaAsp.pdf
20. On approval of the Regulations on electronic educational resources: Order of the Ministry of Education, Youth and Sports of Ukraine dated 01.10.2012 No. 1060. URL:http://zakon2.rada.gov.ua/laws/show/z1695-12.
21. On the National Strategy for the Development of Education in Ukraine for the Period Until 2021: Decree of the President of Ukraine dated 06/25/2013 No. 344/2013. URL:http://zakon2.rada.gov.ua/laws/show/344/2013.
22. Regulations on distance learning (Approved by order of the Ministry of Education and Science of Ukraine dated 21.01.2004 No. 40) URL:http://zakon4.rada.gov.ua/laws/show/z0703-13#n18
23. The procedure for training candidates for the degree of Doctor of Philosophy and Doctor of Science in higher educational institutions (scientific institutions). Resolution of the Cabinet of Ministers of Ukraine dated 23.03.2016 No. 261
24. Methods of teaching technical disciplines: a textbook / M. S. Korets. – Kyiv: Publishing House of the National Polytechnic University named after M. P. Dragomanov, 2019. – 240 p.
25. Ivanov, G. O. Methodology of teaching engineering disciplines [Electronic resource]: course of lectures. Special. 8.01010401 "Professional education. Technology of production and processing of agricultural products" Educational qualification level "Bachelor". / G. O. Ivanov. — Electronic text data. – Mykolaiv: MNAU, 2014. – 54 p.
26. Zhiguts Yu.Yu. Methodology of teaching engineering disciplines / Yu.Yu. Zhiguts, V.F. Lazar – Uzhgorod: Invazor Publishing House, 2016. – 240 p.