

**The Ministry of Education and Science of Ukraine  
National Technical University  
"Dnepr Polytechnic"**

**Department of construction  
Department of geodesy**

**"APPROVED"**

Head of Department

Ryabchiy V. \_\_\_\_\_ " \_\_\_\_ "  
\_\_\_\_\_ 2019

**WORKING PROGRAM TRAINING COURSE  
"Training Practice (geodetic)"**

Field of knowledge ..... 18 Production and Technology  
Specialty ..... 185 Oil Engineering and Technology  
Educational level ..... bachelor  
The educational program ..... Oil Engineering and Technology  
Type discipline ..... regulatory

The form of training ..... .. Full-time / part-time  
Academic year ..... 2019/20  
Semester ..... 2  
Number of ECTS credits ... 3 ECTS credits (90 hours)  
The form of final control  
..... .. diffusion. credit

Teachers: A. \_ Zuska

ACTING: 20 \_\_ / 20\_\_ school year \_\_\_\_\_ (\_\_\_\_\_) " \_\_ " \_\_\_\_ 20\_\_r.  
(Signature, name, date)

20 \_\_ / 20\_\_ school year \_\_\_\_\_ (\_\_\_\_\_) " \_\_ " \_\_\_\_ 20\_\_r.  
(Signature, name, date)

Dnipro  
NTU "SE"  
2019

The work program of discipline "Teaching practice (geodesic)" for Bachelor of 185 specialty "Oil and gas engineering and technology" / AV Zuska / Nat. Sc. Univ. "Dnepr Polytechnic" chair. Surveying - DA: NTU "SE", 2019. - 13 p.

Developers:

Zuska AV, PhD. Sc. Associate Professor, Department of Geodesy.

The work program regulates:

- purpose of discipline;
- disciplinary learning outcomes generated through transformation of learning outcomes of educational programs;
- basic discipline;
- the amount and distribution of the forms of organization of educational process and types of classes;
- Program courses (thematic plan for the types of classes);
- algorithm evaluation of achievements disciplinary learning outcomes (scale products, procedures and evaluation criteria);
- tools, equipment and software;
- recommended sources.

The work program is designed to implement competency approach in planning the educational process of teaching, training students to control measures, monitoring carrying out educational activities, internal and external control of quality assurance, accreditation of educational programs within the profession.

Approved resolution 185 specialty methodical commission "Oil Engineering and Technology "(Minutes № 6 of 07.06.2019).

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## 1 The purpose of DYTSYPLINY

In the educational and professional programs of the National Technical University "Polytechnic Dnepr" specialty 185 'Oil and gas engineering and technology "done distribution of program learning outcomes (NRN) for the organizational forms of the educational process. In particular, the discipline P2 "Training Practice (geodetic)" learning outcomes are classified as:

SR1	To characterize geological processes and the basic laws of formation of rocks, including oil and gas deposits
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**The purpose of discipline** - formation of competences on the foundations of production, transportation and storage of hydrocarbons

Implementation goal requires transformation program learning outcomes in disciplinary and adequate selection of the content of the discipline under this criterion.

## 2 EXPECTED RESULTS TRAINING DISCIPLINARY

Code NRN	Disciplinary learning outcomes (DRN)	
	DRN code	content
SR1	SR1-P2-1	Apply knowledge in practical situations
	SR1- P2-2	Know and understand the field of geodesy and land management
	SR1- P2-3	Work both independently and in a team

## 3 basic disciplines

Disciplines of general training

Subjects	The acquired learning outcomes
Introduction to F1	maintain and increase moral, cultural, scientific achievements and values of society by understanding the history and patterns of development oil and GasIts place in the overall system knowledge about nature and society and the development of society, technology and technology
	communicate with other professional groups at different levels (with experts from other disciplines / economic activities)
	know the overall structure, relationships and functionality of individual elements of the system of Ukraine hydrocarbons

## 4 VOLUMES AND DISTRIBUTION In the form of educational processes and types of classes

Type of classes	Amount ours	Distribution of forms of education/hours					
		day		evening		correspondence	
		Lecture classes	individual work	Lecture classes	individual work	Lecture classes	individual work
lecture	-	-	-	-	-	-	-
practical	90	72	18	-	-	-	-
laboratory	-	-	-	-	-	-	-

workshops	-	-	-	-	-	-	-
TOGETHER	90	72	18	-	-	-	-

### Syllabus 5 Teaching practice (geodesic) BY classes

<b>Ciphers DRN</b>	<b>Types and topics of training sessions</b>	<b>The amount of components hours</b>
<b>1</b>	<b>2</b>	<b>3</b>
SR1-P2-1	<b>1. Creating geodetic routine imaging network.</b>	<b>40</b>
	<b>1.1 Preparatory work.</b> Solving organizational issues; formation of teams, organization of workplace safety training at the geodetic work, getting equipment and materials. Giving the job. Checking theodolite, trial measuring horizontal and vertical angles. Preparation of reporting materials.	10
SR1- P2-2 SR1- P2-3 SR1- P2-4	<b>1.2. Field work.</b> Reconnaissance, selection and fixing points traverse. Measurement of horizontal angles a full reception, angles lines for lines to traverse the course.	12
	<b>1.3. desk work.</b> Charting traverse. Implementation of computer processing traverse: control of angular and linear measurements, equalization increases coordinates and calculating coordinates of the move. Preparation of materials for the report	12
	<b>1.4. Building a gridprinting dots</b> traverse the plan on the scale of 1: 500 (1: 1000). Preparation of materials for the report.	6
SR1- P2-5 SR1- P2-6	<b>2. Create high-altitude imaging network.</b>	<b>12</b>
	<b>2.1.</b> Preparation and field work. Implementation and calibration of leveling rods, measuring test (determination of excess at the station). Laying leveling technical progress in the context of building a high-rise justification to point traverse.	6
	<b>2.2.</b> Desk work. Processing magazine geometric field leveling, high-rise Charting the study. Calculation of elevation points traverse. Extract elevation points on the traverse plan.	6
	<b>3. Design and make a well in nature.</b>	<b>12</b>
	3.1. Planning well in the planned study.	2
	3.2. Calculation of geometric elements for making wells in nature.	6
	3.3. Removal of wells in kind (on location).	4
	<b>4.1. Acquisition and registration practices report.</b> Acceptance of material practices, evaluation of students based on the evaluation criteria. Making report. Credit	<b>8</b>
	<b>Zahalomo</b>	<b>72</b>

## 6 EVALUATION STUDY RESULTS

Certification of student achievement by using transparent procedures based on objective criteria in accordance with the provisions of the University "On the assessment of learning outcomes seekers of higher education."

The achieved level of competence relative to expectations identified during audits reflects the real results of student learning discipline.

### 6.1 Scales

Evaluation of educational achievements of students of NTU "DP" is carried by rating (100-point) and institutional scales. The latter is required (for lack of official national scale) to conversion (transfer) estimates of mobile students.

*The scales of evaluation of educational achievements of students of NTU "SE"*

<b>Ranking</b>	<b>Capacity</b>
90 ... 100	fine / Excellent
74 ... 89	good / Good
60 ... 73	satisfactory / Satisfactory
0 ... 59	Unsatisfactory / Fail

Loans discipline counted if the student has received the final assessment at least 60 points. A lower score is considered academic debt, which is subject to liquidation in accordance with the regulations on the organization of the educational process NTU "SE".

### 6.2 Means and procedures

Content diagnostic tools aimed at formation level control knowledge, communication, autonomy and responsibility of the student to the requirements NLC 8th qualification during a demonstration regulated work program learning outcomes.

Student on control measures should perform the task, focused exclusively on demonstration disciplinary learning outcomes (Section 2).

Diagnostic tools provided to students on control activities as tasks for the current and final control, formed by specifying the data and method demonstrations disciplinary learning outcomes.

Diagnostic tools (control task) for the current and final control subjects approved by the department.

Type of diagnostic tools and procedures for evaluating current and final control subjects below.

#### *Diagnostic and assessment procedures*

<b>CURRENT CONTROL</b>			<b>Final control</b>	
<b>Training sessions</b>	<b>diagnostic tools</b>	<b>procedures</b>	<b>diagnostic tools</b>	<b>procedures</b>

Field work	control tasks to perform measurements using a theodolite and leveling	control measures horizontal angle and determining the excess between the points	comprehensive reference work (CDF)	determining the average results of current controls; CDF performance during the examination at the request of the student
desk work	control tasks to calculate the coordinates and elevation points imaging network	performance computing results of geodetic measurements		
	or individual task	tasks during independent work		
Removal of the well design in nature	geodetic control tasks to bind well to point imaging network	solving inverse geodetic problem		

When current control lectures measured by determining the quality of performance of concretized tasks. Practical classes are valued quality control performance or individual tasks.

If the content of a certain type of employment is subject to several descriptors, the integral value assessment can be determined based weights set by the teacher.

If the results of the current control of all types of classes at least 60 points, final control is carried out without the participation of the student by determining the average value of current estimates.

Regardless of the results of this monitoring every student in the standings is entitled to perform control tasks, which includes questions covering the key results practical training (geodesic).

Number concretized tasks CDF must meet the designated time their implementation. The number of variants CDF should provide individualized job.

Value estimates for the performance field and office work practical training (geodesic) and control tasks circuit is determined by average rating constituent (concretized problems) and is final.

Integral value performance assessment CDF may be determined taking into account the weights established for each department handle NLC.

### 6.3 criteria

Actual results of student learning identified and measured relative to expectations during audits using criteria that describe the actions of the student to demonstrate achievement of learning outcomes.

For evaluation of performance of tasks under the current control of lectures and workshops as the criteria used by the assimilation factor that automatically adapts to the evaluation index rating scale:

$$O_i = 100 a / m,$$

where a - number of correct answers or significant transactions executed according to the standard solution; m - the total number of questions or substantial operations standard.

Individual tasks and complex tests are evaluated using expert criteria, characterizing ratio requirements for the competence and performance evaluation for the rating scale.

Content criteria based on competency characteristics as defined LDCs to master's degree level of higher education (Below).

**General criteria for achieving learning outcomes 7th qualification for LDCs (BA)**

**Integral competence** - the ability to solve complex problems and issues in a particular industry or professional activities in the learning process, involving research and / or innovation and implementation of conditions characterized by uncertainty and requirements.

descriptors NLC	Requirements for knowledge, communication, autonomy and responsibility	Indicator evaluation
<b>Knowledge</b>		
<ul style="list-style-type: none"> <li>◆ Conceptual knowledge acquired during the training and professional activities, including some knowledge of modern achievements;</li> <li>◆ critical understanding of the main theories, principles, methods and concepts in education and careers</li> </ul>	A great - proper, reasonable, sensible. Measures the presence of: <ul style="list-style-type: none"> <li>- conceptual knowledge;</li> <li>- high degree of state ownership issues;</li> <li>- critical understanding of the main theories, principles, methods and concepts in education and careers</li> </ul>	95-100
	A nehrubi contains mistakes or errors	90-94
	The answer is correct, but has some inaccuracies	85-89
	A correct some inaccuracies but has also proved insufficient	80-84
	The answer is correct, but has some inaccuracies, not reasonable and meaningful	75-79
	A fragmentary	70-74
	A student shows a fuzzy idea of the object of study	65-69
	Knowledge minimally satisfactory	60-64
	Knowledge unsatisfactory	<60
<b>Ability</b>		
solving complex problems and unforeseen problems in specialized areas of professional and / or training, which involves the collection and interpretation of information (data), choice of methods and tools, the use of innovative approaches	The answer describes the ability to: <ul style="list-style-type: none"> <li>- identify problems;</li> <li>- formulate hypotheses;</li> <li>- solve problems;</li> <li>- choose the appropriate methods and tools;</li> <li>- collect and interpret logical and understandable information;</li> <li>- use innovative approaches to solving the problem</li> </ul>	95-100
	The answer describes the ability to apply knowledge in practical activities nehrubymy errors	90-94
	The answer describes the ability to apply knowledge in practice, but has some errors in the implementation of a requirement	85-89
	The answer describes the ability to apply knowledge in practice, but has some errors in the implementation of the two	80-84



descriptors NLC	Requirements for knowledge, communication, autonomy and responsibility	Indicator evaluation
	requirements	
	The answer describes the ability to apply knowledge in practice, but has some errors in the implementation of the three requirements	75-79
	The answer describes the ability to apply knowledge in practice, but has some errors in the implementation of the four requirements	70-74
	The answer describes the ability to apply knowledge in practice while performing tasks on the model	65-69
	A characterizing apply knowledge while performing tasks on the model, but with uncertainties	60-64
	poor level of skills	<60
<b>Communication</b>		
<ul style="list-style-type: none"> <li>◆ reports to specialists and non-specialists of information, ideas, problems, solutions and their experience in the field of professional activity;</li> <li>◆ the ability to form effective communication strategy</li> </ul>	Fluent problematic area. Clarity response (report). Language: <ul style="list-style-type: none"> <li>- correct;</li> <li>- clean;</li> <li>- gums;</li> <li>- accurate;</li> <li>- memory;</li> <li>- expressive;</li> <li>- laconic.</li> </ul> Communication strategy: <ul style="list-style-type: none"> <li>- coherent and consistent development of thought;</li> <li>- availability of own logical reasoning;</li> <li>- relevant arguments and its compliance with the provisions vidstoyuvanyam;</li> <li>- correct structure response (report);</li> <li>- correct answers to questions;</li> <li>- appropriate technology to answer questions;</li> <li>- ability to draw conclusions and formulate proposals</li> </ul>	95-100
	Adequate ownership industry issues with minor faults. Sufficient clarity response (report) with minor faults. Appropriate communication strategy with minor faults	90-94
	Good knowledge of the problems of the industry. Good clarity response (report) and relevant communication strategy (total three requirements are not implemented)	85-89
	Good knowledge of the problems of the industry. Good clarity response (report) and relevant communication strategy (a total of four requirements is not implemented)	80-84
	Good knowledge of the problems of the industry. Good clarity response (report) and relevant communication strategy (total not implemented the five requirements)	75-79
	Satisfactory ownership issues of the industry. Satisfactory clarity response (report) and relevant communication strategy (a total of seven requirements not implemented)	70-74
	Partial ownership issues of the industry. Satisfactory clarity response (report) and communication strategy of faults (total not implemented nine requirements)	65-69
	The fragmented ownership issues of the industry.	60-64

descriptors NLC	Requirements for knowledge, communication, autonomy and responsibility	Indicator evaluation
	Satisfactory clarity response (report) and communication strategy of faults (total not implemented 10 requirements)	
	The level of poor communication	<60
<b><i>Autonomy and responsibility</i></b>		
<ul style="list-style-type: none"> <li>◆ management actions or complex projects, the responsibility for decision-making in unpredictable conditions;</li> <li>◆ responsible for the professional development of individuals and / or groups;</li> <li>◆ the ability to further study with a high degree of autonomy</li> </ul>	Excellent individual ownership management competencies focused on: <ul style="list-style-type: none"> <li>1) management of complex projects, providing: <ul style="list-style-type: none"> <li>- exploratory learning activities marked ability to independently evaluate various life situations, events, facts, detect and defend personal position;</li> <li>- ability to work in a team;</li> <li>- control their own actions;</li> </ul> </li> <li>2) responsibility for decision-making in unpredictable conditions, including: <ul style="list-style-type: none"> <li>- justify their decisions the provisions of the regulatory framework of sectoral and national levels;</li> <li>- independence while performing tasks;</li> <li>- initiative to discuss problems;</li> <li>- responsible for the relationship;</li> </ul> </li> <li>3) responsible for the professional development of individuals and / or groups that includes: <ul style="list-style-type: none"> <li>- use professionally-oriented skills;</li> <li>- the use of evidence from independent and correct reasoning;</li> <li>- possession of all kinds of learning activities;</li> </ul> </li> <li>4) the ability to further study with a high degree of autonomy, which provides: <ul style="list-style-type: none"> <li>- degree possession of fundamental knowledge;</li> <li>- independent valuation judgments;</li> <li>- high formation obscheuchebnyh skills;</li> <li>- search for and analyze information sources</li> </ul> </li> </ul>	95-100
	Confident personality possession competency management (not implemented two requirements)	90-94
	Good knowledge management competencies personality (not implemented three requirements)	85-89
	Good knowledge management competencies personality (not implemented the four requirements)	80-84
	Good knowledge management competencies personality (not implemented six requirements)	75-79
	Satisfactory ownership of individual competence management (not implemented seven requirements)	70-74
	Satisfactory ownership of individual competence management (not implemented eight claims)	65-69
	The level of autonomy and responsibility fragmented	60-64
	The level of autonomy and responsibility poor	<60

## 7 TOOLS, EQUIPMENT AND SOFTWARE

Technical training.

Remote platform MOODL.

## **8 RECOMMENDED SOURCES**

1. Borsch-VI Komponyets Geodesy, Fundamentals and аэрофотосъёмку marksheyderskoho affairs / VI Borsch-Komponyets. - Moscow: Nedra, 1984. - 342 p.
2. Methodical specified in uchebnoy heodezycheskoy practice for students 1st year / VI Pogorelov, VI Bandurka. - Dnepropetrovsk, DHY, 1990 - 86 p.

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