

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL TECHNICAL UNIVERSITY
"Dnepr Polytechnic"



PROGRAM
TRAINING AND EVALUATION PRACTICE
for the first (bachelor) level of higher education
SPECIALTY 185 "oil and gas engineering and
TECHNOLOGY "

Dnipro
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Program training and practice for the study of the first (bachelor) level of higher education in the specialty 185 "Oil and gas engineering and technology" / Compiled .: EA Korovyaka, A. Ignatov .; N-of Education and Science of Ukraine, Nat. Sc. University of "Dnepr Polytechnic". - D .: NTU "SE", 2019. - 16 p.

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Methodical commission approved 185 specialty Oil Engineering and Technology (Minutes № 8 of 21.11.19r.) On the proposal of the department of oil and gas drilling and engineering (protocol number 4 from 12.11.19r.).

Posted guidelines for the teaching and practice of the study. The material that helps to activate the executive phase of learning of students during practical skills in educational and professional program "Oil and gas engineering and technology".

Designed for 185 bachelors specialty "Oil and gas engineering and technology."

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1. GENERAL PROVISIONS

The practice of students is an integral part of the process of preparation of specialists for the first (bachelor) level of higher education in the specialty 185 "Oil and gas engineering and technology" in National Technical University "Polytechnic Dnepr". To ensure the practice of candidates Higher Education University establish the forms and methods of cooperation with organizations, companies, institutions, etc., can create conditions for program implementation practices.

The practice provides professional and practical training of students and ensures acquisition of competences specified educational program.

In the educational and professional programs "Oil and gas engineering and technology" done distribution of program learning outcomes for organizational forms of the educational process. In particular, the P3 course "Teaching and evaluation practices" are classified as learning outcomes:

CL7	Demonstrate teamwork skills during laboratory work, course design integrated projects, preparing presentations, internships and more.
SR2	Explain the general structure, relationships and functionality of individual elements of the system of Ukraine hydrocarbons

The purpose of the study, practice - review of higher education seekers with specific future profession and receive primary professional skills.

2. CONTENTS AND MAIN OBJECTIVES PRACTICE

Oil and gas wells are drilled by the rotary method of transmission chisel rotation of the rotor from the wellhead through the drill string or the passing of rotation of shaft chisel directly (through the bottom of the drill string) downhole hydraulic or electric motor - turbodrill, screw auger or elektrobura.

Basic requirements for the choice of the rotation bit determined by the need to ensure a successful trunk wiring hole for possible complications of high technical and economic indicators.

The feasibility of the use of certain methods of drilling and their varieties (shock-rotary, turbine, rotary, turbine reactive with different washing mud, various bits) is determined on the basis of geological, technical and economic factors. These decisions are reviewed as improved drilling technology and equipment (chisels, pipe solutions) and clarify the deepening wells. Perhaps a combination of several methods of wiring at various intervals of the same wells. Also, a number of geological, hydrogeological, geophysical and geotechnical investigations of different nature can be carried out without performing drilling operations. Therefore, teaching and evaluation practices is a necessary part of the curriculum students majoring 185 "Oil and gas engineering and technology"

Training and evaluation practice is in II year, after theoretical studies in the spring semester; the basis for practice is the order of the rector of the university,

which, in particular, the head of practice, educational master a separate educational and industrial area, the list of excursions.

The basis for the study of teaching and practice is educational and experimental drilling ground NTU "Dnepr Polytechnic" with individual educational and industrial areas.

Duration of practice - 4 weeks (6.0 ECTS credits).

Form control practice results - the differentiated offset.

The main tasks of teaching and practice of the study:

1. Formation of higher education applicants on the basis of obtained while studying at the University of theoretical knowledge and practical training, primary professional skills to make independent decisions in the course of their professional activity.

2. Introduction and acquisition of practical knowledge:

a) basic processes drilling;

b) drilling technique different drilling units;

c) geological drilling services (measurement of water level in the well, measurement controlling device core length and depth of the well, rule extraction, storage, stacking and core documentation);

d) the safety of work.

3. Preparation for practical training, course design, performance certification work.

3 ORGANIZATION AND MANAGEMENT PRACTICES

Responsibility for the organization, implementation and quality control practices rests with the Vice Rector of the University. General practice organization and monitoring its implementation in the university provides Head of institution of higher education.

Management practices at faculties makes Dean and Head of Department and Head of the faculty.

Educational and methodical management practices and monitor the implementation of programs performing practices Senior Staff (representatives of relevant departments).

To practice leadership candidates higher education involved experienced teachers.

Departments conducting practice, not later than one month before the practice to prepare and provide to the Dean representation of applicants to practice a particular specialty of higher education.

Submission defined:

- Base and duration of the practice;

- the composition of groups of applicants for higher education;

- Senior Staff.

Distribution of applicants for higher education practice and time spent on management is conducted according to the rules of time planning and accounting of educational, technical, scientific and organizational work of teaching staff National

Technical University "Polytechnic Dnepr".

Distribution of students practice exercises department conducting practice with the obligatory account of concluded contracts and orders for training, and the possibility of future employment.

At the beginning of the practice of higher education applicants are instructed on safety and health, acquainted with the internal regulations of the enterprise, the procedure of obtaining documents and materials.

Competitors of higher education, studying on the job and do not work in the specialty, should receive introductory training and practice, the curriculum.

If applicants are higher education in the chosen specialty, department rank for practicing the curriculum loans without passing it on the basis of certificates of employment and protection of the individual report tasks.

The working hours of higher education applicants during their practice is regulated by the Labor Code of Ukraine and the applicable rules of time planning and accounting of educational, technical, scientific and organizational work of teaching staff National Technical University "Polytechnic Dnepr".

Training and practice evaluation conducted by Brigadier.

Rules of practice:

- 1 day - study safety rules and submission offset technique of safe drilling operations;

- 4 days - a theoretical acquaintance with the methods of working on individual training and industrial sites, watching educational films;

- 12 days - work on educational and industrial areas of teaching and experimental drilling polygon, excursions and report on the practice;

- 3 days - work and final assembly of the differential offset.

Each educational-industrial area students work under the supervision of the head of laboratory of petroleum engineering and drilling head or drilling site.

Practice on educational and industrial sites began to study the safety regulations. Each educational and industrial area of study: 1) features safe conduct of work, 2) the fundamental structure, a brief description and purpose of existing equipment and tools, 3) drilling technology features and control unit.

4. REPORTING TRAINING AND PRACTICE The evaluation

Report teaching and practice of the study should contain the following sections of this content:

- title page report on the study of teaching and practice in the prescribed form;

- general provisions of safety regulations during the passage of the study of teaching and practice on the training ground and experimental drilling NTU "Dnepr Polytechnic";

- information on drilling and laboratory equipment training and industrial sites for the following content:

Educational and industrial area of combat-pilot drilling polygon number 1

Drilling Rig UKB-4P:

- appointment;

- a short technical characteristics;
- the scheme drilling machine SKB-4;
- the scheme of construction of wells;

Educational and industrial area of combat-pilot drilling polygon number 2

Drilling rig FSM-15M:

- appointment;
- a short technical characteristics;
- the scheme of drilling the machine;
- drilling tools;
- Technology bobtail.

Educational and industrial area of combat-pilot drilling polygon number 3

Drilling rigs URB-2,5A (visuals, posters) and UCB-200 / 300C:

- appointment;
- the scheme of construction of wells;
- a short technical characteristics;
- kinematic scheme of the machine.

Educational and industrial area of combat-pilot drilling polygon number 4

Mud pump NB-32 NB4-320 / 63, NB-5:

- appointment;
- circuit design and operating principle;
- a short technical characteristics;
- kinematic circuit pumps.

Educational and industrial area of combat-pilot drilling polygon number 5

Laboratory of oil and drilling fluid mixes:

- the appointment of individual devices;
- circuit design and operating principle;
- determination of the order.

Educational and industrial area of combat-pilot drilling polygon number 6

Laboratory rock mechanics:

- the appointment of individual devices;
- circuit design and operating principle;
- determination of the order.

Educational and industrial area of combat-pilot drilling polygon number 7

Information on the core, directional, rotational and shock-turbine drilling:

- the appointment of separate drilling units;
- the appointment of individual devices;
- circuit design and operating principle;
- drilling technology.
- drilling technology.

- conclusions for each section of the report on the work of educational and industrial areas;
- Tour reports on oil and gas companies and related industries, which in addition to general information, there may be more information about the company visited, specifications and other drilling equipment company, photos and so on.
- report content for teaching and practice of the study;
- References.

5. OBLIGATIONS OF PARTICIPANTS Banquet OF TEACHING AND PRACTICE introductory

5.1 The main duties of the head of the university practices:

- concluding at the beginning of the school year at the request graduating department contracts with enterprises (organizations, institutions) are determined to base practice valid for one to five years;
- coordination of the timing of practice and the number of applicants higher education - trainees;
- clarify with managers bases its conduct practice conditions;
- Chairs provide information on the availability of practice under the concluded contracts;
- control over the practice, analysis and synthesis of results;
- Departments providing documentation on practice;
- control the availability of program practices;
- Analysis reports faculties (institutes) the results of practice and preparation of the final certificate;
- Practices provide the basis for approval of the program (two months before the start of practice), not later than one week - a list of student-trainees.

5.2 The main duties of dean:

- control over the timely development department, conducting practice, representation of applicants to practice a particular specialty of higher education;
- Organization drafting the order of the rector of internship applicants for higher education;
- Head of meetings (responsible for specific practices);
- Reporting to the Academic Council faculty (university) on the status and prospects practices;
- control over the organization and conduct of organizational measures before sending candidates to higher education practices, timely protection practices results in the departments;
- process control contracts with bases practices;
- Readiness practice database to host students and appropriate training activities;

- Sector representation in practice educational department a written report on the results of practice no later than the first working week of December.

5.3 The main duties of head of the department that conducts practice:

- organization development and improvement programs of certain practices and other teaching documents and reports (including the specific specialty 185 Oil and gas engineering and technology);
 - event before sending candidates to the practice of higher education, including:
 - monitoring the passage of applicants practices of higher education based on practice;
 - Head of coordination assigned to groups of applicants for higher education;
 - submission Dean Faculty and Head of the University of the written report of practice with comments and suggestions to improve practices.

5.4 Main responsibilities forerivnyka practice of the department:

- briefing on the order of practice on health;
- grant applicants higher education - trainees required documents (applications, guidelines, etc.) listed in the program is installed on the practice of candidates higher education With specific training in the specialty 185 Oil Engineering and Technology;
- review candidates higher education a system of reporting practices, namely a written report Protection report;
- of applicants to higher education prior discussion of the content and results of practice needs change programs, etc;
- development subjects of individual tasks, taking into account trends in research, course work and qualifications;
- coordination with representatives of organizations, institutions, etc. program of excursions;
- Controls to ensure proper working and living conditions interns;
- monitor the timely arrival of competitors higher education to places of excursions;
- provide consultations to applicants higher education while performing their individual tasks and collecting materials;
- consultation on processing the material collected and its use for reporting practices;
- receiving and evaluating reports of candidates higher education of practical training;
- reporting seekers higher education the practice to store the department.

5.5 The main duties of the company representative during the tour:

- briefing and compliance applicants higher education safety rules and safety;
- assistance applicants higher education use the available literature, the necessary documentation etc.
- creating the necessary conditions to familiarize applicants Higher Education new equipment, modern technologies and methods of work organization.

5.6 Applicants higher education in passing practice must:

- prior to practice to get instructions on the order of practice and safety, advice on the registration of all necessary documents;
- fully perform all the tasks under the program practice;
- observe safety rules, safety and industrial hygiene;
- be responsible for the work;
- timely submit a report on internships and protect it.

In the case of non-compliance with the eligibility criteria of the trainee, it can be removed from further practical training.

6. CRITERIA TRAINING AND PRACTICE The evaluation

Upon expiration of the practices of higher education applicants report on the program. Reporting on the applicant higher education internship - a written report.

Report seekers with higher education takes practice by Head of Department.

The head of department takes practice to test candidates higher education the University for first two weeks semester, which begins at the end of practice.

If applicants higher education you need to get an estimate from practice before the start of the semester (go to study in another institution of higher education, etc.) from the Head of Department receives credit for one week after practice.

Evaluation results of the practice of students held a 100-point scale with the mandatory transfer of scores to institutional scale. Score introduced the practice to test-examination information and academic records of the applicant higher education signed by the head of department practice.

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

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

The choice of specification and detail evaluation criteria with a specific educational program "Oil and gas engineering and technology" and their components shall based on common criteria below:

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

Integral competence - the ability to solve complex problems and specialized practical problems in a particular industry or professional activities in the learning process, which involves the use of certain theories and methods relevant science and characterized by complexity and uncertainty conditions.

descriptors NLC	Requirements for knowledge, communication, autonomy and responsibility	Indicator evaluation
Knowledge		

descriptors NLC	Requirements for knowledge, communication, autonomy and responsibility	Indicator evaluation
<p>◆ Conceptual knowledge acquired during the training and professional activities, including some knowledge of modern achievements;</p> <p>◆ critical understanding of the main theories, principles, methods and concepts in education and careers</p>	<p>- A great - proper, reasonable, sensible. Measures the presence of: - conceptual knowledge; - a high degree of state ownership issues; - critical understanding of the main theories, principles, methods and concepts in education and careers</p>	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	74-79
	A fragmentary	70-73
	A student shows a fuzzy idea of the object of study	65-69
	Knowledge minimally satisfactory	60-64
	Knowledge unsatisfactory	<60
Ability		
<p>◆ 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</p>	<p>- The answer describes the ability to:</p> <ul style="list-style-type: none"> - identify the problem; - formulate hypotheses; - solve problems; - choose adequate methods and tools; - collect and interpret logical and understandable information; - use innovative approaches to solving the problem 	95-100
	The answer describes the ability to apply knowledge in practice with no blunders	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 requirements	80-84
	The answer describes the ability to apply knowledge in practice, but has some errors in the implementation of the three requirements	74-79
	The answer describes the ability to apply knowledge in practice, but has some errors in the implementation of the four requirements	70-73
	The answer describes the ability to apply knowledge in practice while performing tasks on the model	65-69
	A characterizes the ability to apply knowledge in performing tasks on the model, but with uncertainties	60-64
	The level of skill poor	<60
Communication		

descriptors NLC	Requirements for knowledge, communication, autonomy and responsibility	Indicator evaluation
<p>◆ reports to specialists and non-specialists of information, ideas, problems, solutions and their experience in the field of professional activity;</p> <p>◆ the ability to form effective communication strategy</p>	<p>- Fluent problematic area. Clarity response (report). Language - correct;</p> <ul style="list-style-type: none"> - - net; - - clear; - - accurate; - - Logic; - - expressive; - - concise. <p>Communication strategy:</p> <ul style="list-style-type: none"> - coherent and consistent development of thought; - availability of own logical reasoning; - relevant arguments and its compliance with the provisions vistoyuvanyam; - the correct structure response (report); - correct answers to questions; - appropriate equipment to answer questions; - the ability to draw conclusions and formulate proposals 	95-100
	<p>Adequate ownership industry issues with minor faults. Sufficient clarity response (report) with minor faults. Appropriate communication strategy with minor faults</p>	90-94
	<p>Good knowledge of the problems of the industry. Good clarity response (report) and relevant communication strategy (total three requirements are not implemented)</p>	85-89
	<p>Good knowledge of the problems of the industry. Good clarity response (report) and relevant communication strategy (a total of four requirements is not implemented)</p>	80-84
	<p>Good knowledge of the problems of the industry. Good clarity response (report) and relevant communication strategy (total not implemented the five requirements)</p>	74-79
	<p>Satisfactory ownership issues of the industry. Satisfactory clarity response (report) and relevant communication strategy (a total of seven requirements not implemented)</p>	70-73
	<p>Partial ownership issues of the industry. Satisfactory clarity response (report) and communication strategy of faults (total not implemented nine requirements)</p>	65-69
	<p>The fragmented ownership issues of the industry. Satisfactory clarity response (report) and communication strategy of faults (total not implemented 10 requirements)</p>	60-64
	<p>The level of poor communication</p>	<60
	Autonomy and responsibility	

descriptors NLC	Requirements for knowledge, communication, autonomy and responsibility	Indicator evaluation
<ul style="list-style-type: none"> ◆ management actions or complex projects, responsible for decision-making in unpredictable conditions; ◆ responsible for the professional development of individuals and / or groups ◆ the ability to further study with a high degree of autonomy 	<ul style="list-style-type: none"> - Excellent individual ownership management competencies focused on: <ol style="list-style-type: none"> 1) management of complex projects, providing: <ul style="list-style-type: none"> - exploratory learning activities marked ability to independently evaluate various life situations, events, facts, detect and defend personal position; - the ability to work in a team; - control of their own actions; 2) responsibility for decision-making in unpredictable conditions, including: <ul style="list-style-type: none"> - justify their decisions the provisions of the regulatory framework of sectoral and national levels; - independence while performing tasks; - lead in discussing problems; - responsibility for the relationship; 3) responsible for the professional development of individuals and / or groups that includes: <ul style="list-style-type: none"> - use of vocational-oriented skills; - the use of evidence from independent and correct reasoning; - possession of all kinds of learning activities; 4) the ability to further study with a high degree of autonomy, which provides: <ul style="list-style-type: none"> - degree possession of fundamental knowledge; - independent evaluation judgments; - High level of formation obscheuchebnyh skills; - search for and analyze information sources 	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)	74-79
	Satisfactory ownership of individual competence management (not implemented seven requirements)	70-73
	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

The final grade for practice (exposed point) is taken into account in determining the rating for the semester during which there was protection, and designed scholars. - ips.

A student who has not fulfilled the practice program for valid reasons, may be eligible to practice again for the next school year on an individual schedule. The student who received a second negative evaluation of practice, measured from the

university.

Live organization and passing the study of teaching and practice of higher education applicants, proposals for further improvements discussed at annual meeting of the department, and general practice summed up at the meeting of the Academic Council of the Faculty of exploration.

LIST OF SOURCES LINKS

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Educational edition

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