Federal State Autonomous Educational Institution for Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA (RUDN University)
named after Patrice Lumumba

Institute of Environmental Engineering

COURSE SYLLABUS

MODERN REMEDIATION TECHNOLOGIES

Recommended by the Didactic Council for the Education Field for the specialization:
05.04.06 "Ecology and nature management"

The course instruction is implemented within the professional education programme of higher education:

«Integrated Solid Waste Management»

2025

1. COURSE GOAL(s)

The course is designed to help students the in the field of eliminating accumulated environmental harm (EHH). Studying the sources of formation of objects of accumulated harm. Main types of objects, their brief characteristics, principles of classification and subsequent reclamation. Technologies for remediation of objects of accumulated damage (soils, water bodies). In situ and ex situ methods. Mechanical recycling. Thermal methods. Biological methods.

As a result of course studying, the student must:

2. REQUIREMENTS FOR COURSE OUTCOMES

The course implementation is aimed at the development of the following competences:

Competence code	**Competence descriptor**	**Competence formation indicators** (within this course)
GC -2	Capable of managing a project at all stages of its life cycle	**GC -2.1** Has a systematic understanding of the theoretical and methodological foundations of environmental regulation;
GPC-3	Able to apply ecological research methods to solve research and applied problems of professional activity	**GPC-3.1** Able to identify and possess the skills to solve problems, tasks of scientific research in the field of urban geography, environmental problems of cities;
		GPC -3.2 Proficient in modern methods of assessing geoecological information to solve theoretical and practical problems of nature management;
PC-3	the ability to creatively use knowledge of fundamental and applied sections of special disciplines of the master's program in scientific and industrial-technological activities	**PC-3.1** Able to study the natural, man-made, socio-economic, demographic and medical-biological situation, conduct a search for cultural heritage sites in the territory under study;
PC-4	the ability to use modern methods of processing and interpreting environmental information when conducting scientific and industrial research	**PC-4.1** Know the role and limitations of the application of statistical methods in scientific and practical research; **PC-4.2** Know computer tools for processing statistical data and solving statistical problems;
PC-5	the ability to develop standard environmental protection measures and assess the impact of planned structures or other forms of economic activity on the environment	**PC-5.2** Capable of developing standard environmental protection measures;

PC-6	the ability to diagnose problems of nature conservation, develop practical recommendations for its protection and sustainable development	**PC-6.1** Able to carry out the necessary calculations for planning, modeling and forecasting the development of a territorial object

As a result of course studying, the student must:

Know:

- Technological solutions for the remediation of contaminated areas.
- General issues of work on rehabilitation and arrangement of disturbed lands.
- Classification of disturbed lands according to technogenic relief and area.
- Types of natural-technogenic landscapes.
- Stages of remediation of natural and technogenic landscapes

Be able to:

- correctly classify the objects of accumulated damage to the environment,
- reasonably choose methods of remediation of objects of accumulated damage to the environment,
- evaluate the environmental and economic efficiency of the measures taken;

Own :

- methods of drawing up schemes for the integrated remediation of disturbed lands and water bodies,
- the skills of choosing the best available technology for eliminating the damage to the environment.

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

Discipline ***Nature Protection and Accumulated Environmental Damage (AED) Elimination Tools / Инструменты защиты окружающей среды и ликвидации накопленного ущерба*** refers to the Variative part of the curriculum.

Within the higher education programme students also master other disciplines (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course.

Table 3.1

The list of the higher education programme components that contribute to the achievement of the expected learning outcomes

Competence code	**Competence descriptor**	**Previous courses/modules, internships***	**Subsequent courses/modules, internships***
GC -2	Capable of managing a project at all stages of its life cycle	Environmental Impact Assessment (EIA) of SWM objects;Work Experience Internship; Research Work;	Pre-graduation Practical Training;

GPC-3	Able to apply ecological research methods to solve research and applied problems of professional activity	Modern technologies for nature protection;Regional & Municipal MSW Management Systems; Environmental Impact Assessment (EIA) of SWM objects;Work Experience Internship; Research Work;	Pre-graduation Practical Training;
PC-2	the ability to creatively use knowledge of fundamental and applied sections of special disciplines of the master's program in scientific and industrial-technological activities	Environmental Impact Assessment (EIA) of SWM objects; Methodology of Scientific Creation; Work Experience Internship; Research Work;	Pre-graduation Practical Training;
PC-4	the ability to use modern methods of processing and interpreting environmental information when conducting scientific and industrial research	IT in Ecology and Natural Resources Management; Research Work;	Pre-graduation Practical Training;
PC-5	the ability to develop standard environmental protection measures and assess the impact of planned structures or other forms of economic activity on the environment	Work Experience Internship; Environmental Impact Assessment (EIA) of SWM objects;***Mapping and GIS-technologies in MSW Management****;***Remote Sensing of MSW objects****; History of Religions in Russia; Research Work;	Pre-graduation Practical Training;
PC-6	the ability to diagnose problems of nature conservation, develop practical recommendations for its protection and sustainable development	Research Work;Regional & Municipal MSW Management Systems;*Basics of Circular Economics***; *Green Economy and Tools for Enterprises Sustainable Development***;	Pre-graduation Practical Training;

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the discipline is **3** credit units.

Table 4.1. Types of academic activities during the period of the HE program(me) mastering

Types of academic activities	**Total hours**	**Semester(s)**			
		1	**2**	**3**	**4**
Contact academic hours	*51*			*51*	
Lectures	17			17	
Lab works					

Seminars (workshops/tutorials)		34			34	
Self-study		*39*			*39*	
Evaluation and assessment (exam; pass/fail grading)		*18*			*18*	
The total course workload	hours	**108**			**108**	
	credits	**3**			**3**	

5. COURSE CONTENT

Table 5.1. Course Modules and Contents

Title of Course Modules		**Content**	**Types of academic activities**
1.	Introduction	The main sources of accumulated environmental damage and the features of its impact on the environment.	L, S
		Foreign experience in the elimination of objects of accumulated harm to the environment The scale of accumulated harm and the experience of land rehabilitation in Europe and the USA.	
	Classification of AED objects	Approaches to the classification of objects of accumulated environmental damage. Assignment criteria	L, S
		Classification of technological solutions (methods) for the rehabilitation of objects of accumulated harm.	
		Classification of disturbed lands according to technogenic relief and area. Types of natural technogenic landscapes.	
	Stages of restoration of natural-technogenic landscapes. Examples of the most dangerous objects.	Stages of restoration of natural and technogenic landscapes	L, S
		Formation of vegetation cover on dumps and artificial reservoirs	
		Requirements for the reclamation of lands disturbed during the construction and operation of linear structures	
		Peculiarities of Rehabilitation of Certain Objects of Accumulated Damage to the Environment AED and Specific Territories	L, S
		Restoration of water bodies	
		Features of reclamation of MSW landfills as objects of accumulated harm	

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements

Classroom for Academic Activity Type	Classroom equipment	Specialized educational / laboratory equipment, software and materials for mastering the course (if necessary)
Lecture	Classroom, equipped with a set of specialized furniture; whiteboard; a set of devices includes portable multimedia projector, laptop, projection screen, stable wireless	Classroom, equipped with a set of specialized furniture; whiteboard; a set of devices includes portable multimedia projector, laptop, projection screen, stable wireless Internet connection. Software: Microsoft Windows, MS Office / Office 365, MS Teams, Chrome (latest stable release), Skype. Microsoft Windows 7 corporate. License No. 5190227, date of issue March 16, 2010 MS Office 2007 Prof , License # 6842818, date of issue 09/07/2009
Seminars	Classroom, equipped with a set of specialized furniture; whiteboard; a set of devices includes portable multimedia projector, laptop, projection screen, stable wireless	
Computer Lab	Computer Lab for conducting classes, group and individual consultations, current control and intermediate certification, equipped with personal computers (in the amount of 12), a board (screen) and technical devices of multimedia presentations.	No
For Self-Study	Classroom for self-study (can be used for seminars and consultations), equipped with a set of devices includes laptop, stable wireless.	No

7. RECOMMENDED SOURCES FOR COURSE STUDIES

a) **Main reading:**

1. Niyitanga Evode, Sarmad Ahmad Qamar, Muhammad Bilal, Damià Barceló, Hafiz M.N. Iqbal, Plastic waste and its management strategies for environmental sustainability, Case Studies in Chemical and Environmental Engineering, Volume 4, 2021, https://doi.org/10.1016/j.cscee.2021.100142

2 D.M. Hamby SITE REMEDIATION TECHNIQUES SUPPORTING ENVIRONMENTAL RESTORATION ACTIVITIES: A REVIEW University of Michigan Ann Arbor, MI 48109-2029 U.S.A 37p https://www.eni.com/assets/documents/eng/enirewind/remediation/vademecum-eng.pdf

3. Remediation Technologies Handbook
https://www.eni.com/assets/documents/eng/enirewind/remediation/vademecum-eng.pdf

4 Practice Guide for Investigation and Remediation of Contaminated Land Environmental Protection Department The Government of the Hong Kong Special Administrative Region 2023 75p, https://www.epd.gov.hk/epd/sites/default/files/epd/gn_pdf/GN2014P244-2011c-e.pdf

5. Ankur Rajpal, Moharana Choudhury, Srijan Goswami, Arghya Chakravorty, Vimala Raghavan Waste Management and Treatment Advances and Innovations 1st Edition CRC Press 2024, 346 p, https://doi.org/10.1201/9781003258377
6. Waste Treatment in the Biotechnology, Agricultural and Food Industries Handbook of Environmental Engineering Lawrence K. Wang, Mu-Hao Sung Wang, Yung-Tse Hung Springer Cham, 2022 DOIhttps://doi.org/10.1007/978-3-031-03591-3

b) **Additional reading**

1 Соловьянов А. А., Чернин С. Я. Ликвидация накопленного вреда окружающей среде в Российской Федерации. — М.: Наука РАН, 2017 — 456 с
2 Henrik Haller Soil Remediation and Sustainable Development- Creating Appropriate Solutions for Marginalized Regions Faculty of Science, Technology and Media Thesis for Doctoral degree in Ecotechnology and Environmental Science Mid Sweden University Östersund, 2017-06-15 https://www.diva-portal.org/smash/get/diva2:1094867/FULLTEXT02.pdf
3 Hemen Sarma • Sanket Joshi Land Remediation and Management: Bioengineering Strategiesm Springer, 2023-,411 p https://doi.org/10.1007/978-981-99-4221-3
4 Stein, Alfred & Kerle, Norman. (2008). Environmental Remediation. 10.1002/9780470061596.risk0317 .
5 Xinyue Liu, Weijun Qi, Shuang Cui, Lianghe Lv, Jianyu Jiang, Jing Jiang, Ziyue Zhu A Comparison of Different Remediation Technologies of Contaminated Agricultural Soils E3S Web of Conferences , 03018 (2023) ICEMEE 2023 https://doi.org/10.1051/e3sconf/202340603018

Internet-based sources

1. ELS of RUDN University and third-party ELS, to which university students have access on the basis of concluded agreements:

- RUDN Electronic Library System - RUDN EBS http://lib.rudn.ru/MegaPro/Web
- ELS "University Library Online" http://www.biblioclub.ru
- EBS Yurayt http://www.biblio-online.ru
- ELS "Student Consultant" www.studentlibrary.ru
- EBS "Lan" http://e.lanbook.com/
- EBS "Trinity Bridge"

2. Databases and search engines:

- electronic fund of legal and normative-technical documentation http://docs.cntd.ru/
- Yandex search engine https:// www .yandex.ru/
- Google search engine https://www.google.ru/
- abstract database SCOPUS http:// www .elsevierscience.ru/ products / scopus /

8. MID-TERM ASSESSMENT AND EVALUATION TOOLKIT

Evaluation materials and a point- rating system* for assessing the level of competence formation (part of competences) based on the results of mastering the discipline **Nature Protection and Accumulated Environmental Damage (AED) Elimination Tools** are presented in the Appendix to this course syllabus.

DEVELOPER:

Associate Professor of the EM **Kapralova D.O.**

Department

Position	Signature	Name, Surname
HEAD OF DEPARTMENT: Director of the EM Department		**Kucher D.E.**

Position	Signature	Name, Surname
HEAD OF PROGRAMME: Associate Professor of the EM Department		**Kapralova D.O.**

Position	Signature	Name, Surname

Department Environmental Management

APPROVED
Department meeting protocol No_____,
Dated
_____
_____
_____
day, month, year
Head of Educational Department
_____(Kucher D.E.)
signature

ASSESSMENT TOOLKIT

for the course

Modern remediation technologies / Современные технологии рекультивации

course title

05.04.06 "Ecology and nature management"
field of studies / speciality code and title

«Integrated Solid Waste Management»
higher education programme profile/specialisation title

master
graduate's qualification (degree)

Passport to Assessment Toolkit for Course Modern remediation technologies / Современные технологии рекультивации

Field of Studies / Speciality 05.04.06 "Ecology and nature management"
code title

Course: Modern remediation technologies / Современные технологии рекультивации

Competences (competences in part) under assessment	Course module under assessment	Course topic under assessment	Tools to assess higher education programme mastering level								Points for topic	Points for module
			Class work					Self-studies		Exam/Pass-fail assessment		
			Quiz	Test	Report	Seminar	Lection	Homework	Calculation and graphic work			
GPC-4	Module 1: Introduction	Topic 1: The main sources of accumulated environmental damage and the features of its impact on the environment	1	2		0,5	0,5	5		2	6	11

		Topic 2: Foreign experience in the elimination of objects of accumulated harm to the environment The scale of accumulated harm and the experience of land rehabilitation in Europe and the USA	1	1		0,5	0,5			2	5	
GC -3 **GPC-4** **PC-6**	Module 2: Classification of AED objects	Topic 1: Approaches to the classification of objects of accumulated environmental damage. Assignment criteria	1	2		0,5	0,5			1	5	20
		Topic 2: Classification of technological solutions (methods) for the rehabilitation of objects of accumulated harm	1	2		0,5	0,5		5	2	11	
		Topic 3: Classification of disturbed lands according to technogenic relief and area. Types of naturaltechnogenic landscapes.	1	2		0,5	0,5			2	6	
GC -3 **GC-7** **GPC-4** **PC-1** **PC-6**	Module 3: Stages of restoration of naturaltechnogenic landscapes. Examples of the most dangerous objects	Topic 1: Stages of restoration of natural and technogenic landscapes	2	2		0,5	0,5			1	6	
		Topic 2: Formation of vegetation cover on dumps and artificial reservoirs	2	2	10	0,5	0,5		5	1	21	
		Topic 3: Requirements for the reclamation of lands disturbed during the construction and operation of linear structures	2	1		0,5	0,5			2	6	

		Topic 4: Peculiarities of Rehabilitation of Certain Objects of Accumulated Damage to the Environment AED and Specific Territories	2	2		0,5	0,5			1	6	
		Topic 5: Restoration of water bodies	2	2		0,5	0,5		5	1	11	
		Topic 6: Features of reclamation of MSW landfills as objects of accumulated harm	2	2		0,5	0,5	5	5	2	17	
		Total	**17**	**20**	**10**	**5,5**	**5,5**	**10**	**20**	**17**	**100**	

Passport to Assessment Toolkit for Course Modern remediation technologies / Современные технологии рекультивации

course title

QUESTION CARD No

QUESTION 1 Wastes that are generated during the enrichment of mined minerals

QUESTION 2 Type of reclamation intended for preliminary preparation of disturbed areas for various uses

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Developer_____(Kapralova D.O.)
signature

Head of Educational Department_____(Kucher D.E.)
signature

_____
day, month, year

Note * Practice case/task inclusion is subject to the teacher's discretion.

The set of exam question cards is complemented by the assessment criteria developed by the teacher and approved at the department meeting.

Assessment criteria:

(*in compliance with the legal regulations in force*)

Test question examples

1) The most important criterion for establishing the sequence of actions for the liquidation of a specific object of AED:
   A) the level of environmental safety
   B) area of the Object
   C) the mass of accumulated production and consumption waste
   D) remoteness of the Object from the residential area
2) What is the purpose of processing metal-containing sludge?
   a) - saving electrical energy
   b) -increasing the efficiency of industry
   c) -- improvement of the environmental situation
   d) - to create additional jobs.
7) The components of waste rubber products (RTI) include:
   a) - oil b) - methane
   c) - pine oil
   d) - rubber.
8) How is coal preparation waste used?
   1) - as a mineral fertilizer
   2) - as fuel
   3) - as an element of building materials
   4) - as an element in the manufacture of furniture.
9) What methods relate to the thermal processing of waste.
   a) - pyrolysis

b) - extraction

c) - leaching

The set of exam question cards is complemented by the assessment criteria developed by the teacher and approved at the department meeting.

Assessment criteria:

(*in compliance with the legal regulations in force*)

The assessment of all results of mastering competencies is carried out in accordance with the scale of the international point-rating system ECTS. In accordance with the calculated grading system, the student gains the required points.

Work in class: depends on the complexity of the topic.

The grade is given for attendance and active work at a seminar or lecture (lectures are held in an interactive form) - answers to current questions, notes, discussion. The student is present at the lesson, participates in the discussion, does not hesitate to answer questions - maximum score. The student is absent or the task is not prepared - 0 points.

Tasks of Self-studies: - acquisition of skills of independent practical work in the recommended software and application of various research methods; - developing the ability to independently and critically apply the material being studied. The SR technology should ensure the acquisition of knowledge, the consolidation and systematization of knowledge, the formation of skills and abilities. The proven technology is characterized by an algorithm that includes the following logically related student actions: - reading a text (textbook, manual, lecture notes); - note-taking of the text; - problem solving and exercises; - answers to control questions;

Final certification: A student is considered to have successfully passed the milestone or final certification if the total score for all activities at the time of certification exceeds 50% of the maximum possible score (lecture work, practical assignment, tests).

The final grade for the semester is added up as the sum of points for all types of student activities (*see toolkit passport) and can reach a maximum of 83 points.

The final test is given by the student voluntarily, if he scored the minimum possible score for certification - 51 points. In other cases, the exam/pass/fail assessment is mandatory and is estimated at a maximum of 17 points, as a result, the total score is derived taking into account the result of passing the test and the final grade corresponds to the international ECTS scale.

Tentative list of assessment tools

№ / п	Assessment tool	Brief features	Assessment tool representation in the kit
Class work			
1	Survey/Quiz	A tool of control, organized as a special conversation between a teacher and students on topics related to the course under study, and designed to clarify the amount of students' knowledge in a particular section, topic, problem, etc.	Questions on the course topics /modules
2	Test	A system of standardised tasks that allows the teacher to automate the procedure for measuring the student's level of knowledge and skills	Tests bank

9.	Presentation (defence) of project/report/ Library research paper /briefs *	A tool for monitoring the students' ability to present the work results to the audience.	Themes for projects/reports/ Library research paper/ briefs
10	Pass/Fail assessment	A tool for checking the quality of students' performance of laboratory work, acquisition and mastering of the practice training and seminar educational material, successful completion of the advanced field internship and pre-graduate internship and fulfillment of all training assignments in the course of these internships in accordance with the approved programme.	Tasks examples
11	Exam	The evaluation of the student's work during the semester (year, the entire period of study, etc.); it is designed to identify the level, soundness and systematic nature of theoretical and practical knowledge gained by the student, formation of independent work skills, development of creative thinking, ability to synthesise the acquired knowledge and apply it to solve practice tasks.	Examples of tasks/questions/exam question cards
14	Multi-level tasks and assignments with varying difficulty	The tasks and assignments differ in terms of the following levels: a) reproductive level allows the teacher toevaluate and diagnose the students' knowledge of factual material (basic concepts, algorithms, facts) and the students' ability to correctly use special terms and concepts, recognize objects of study within a certain section of the discipline, b) reconstructive level allows the teacher toevaluate and diagnose the students' abilities to synthesise, analyse, generalise factual and theoretical material and formulate specific conclusions, establish cause-and-effect relationships,	Set of multi-level tasks and assignments with varying difficulty
		c) creative level allows to evaluate and diagnose students' skills to integrate knowledge of various fields, argue their own point of view.	
Self- studies			
1	Calculation and graphic work	A tool for checking students' skills in applying the acquired knowledge according to a predetermined methodology in task solving or fulfilling assignments for a module or discipline as a whole.	Set of tasks for calculation and graphic work

8	Homework	The tasks and assignments differ in terms of the following levels: a) reproductive level allows the teacher toevaluate and diagnose the students' knowledge of factual material (basic concepts, algorithms, facts) and the students' ability to correctly use special terms and concepts, recognize objects of study within a certain section of the discipline, b) reconstructive level allows the teacher toevaluate and diagnose the students' abilities to synthesise, analyse, generalise factual and theoretical material and formulate specific conclusions, establish cause-and-effect relationships, c) creative level allows the teacher to evaluate and diagnose students' skills to integrate knowledge of various fields, argue their own point of view.	Set of multi-level tasks and assignments with varying difficulty

Criteria for assessing students' knowledge

Points BRS	Traditional grades in the Russian Federation	Points for transferring grades	Grades	ECTS grades
86 - 100	5	95 – 100	5+	A
		86 – 94	5	B
69 - 85	4	69 – 85	4	C
51 - 68	3	61 - 68	3+	D
		51 - 60	3	E
0 - 50	2	31 - 50	2+	FX
		0 - 30	2	F

Explanation of the rating table:

A	"Excellent" - the theoretical content of the course is mastered completely, without gaps, the necessary practical skills for working with the mastered material are formed, all the training tasks provided for by the training program are completed, the quality of their implementation is estimated by a number of points close to the maximum.

B	"Very good" - the theoretical content of the course is mastered completely, without gaps, the necessary practical skills for working with the mastered material are basically formed, all the training tasks provided for by the training program are completed, the quality of most of them is estimated by a number of points close to the maximum.

C	“Good” - the theoretical content of the course has been mastered completely, without gaps, some practical skills in working with the mastered material are not sufficiently formed, all the training tasks provided for by the training program have been completed, the quality of none of them has been assessed with a minimum number of points, some types of tasks have been completed with errors.
D	“Satisfactory” - the theoretical content of the course has been partially mastered, but the gaps are not significant, the necessary practical skills for working with the mastered material are basically formed, most of the training tasks provided for by the training program have been completed, some of the completed tasks may contain errors.
E	“Mediocre” - the theoretical content of the course is partially mastered, some practical work skills are not formed, many training tasks provided for by the training program are not completed, or the quality of some of them is estimated by a number of points close to the minimum.
FX	“Conditionally unsatisfactory” - the theoretical content of the course has been partially mastered, the necessary practical skills have not been formed, most of the training tasks provided for by the training program have not been completed, or the quality of their implementation has been assessed with a number of points close to the minimum; with additional independent work on the course material, it is possible to improve the quality of the implementation of educational tasks.
F	**“** Definitely unsatisfactory” - the theoretical content of the course has not been mastered, the necessary practical work skills have not been formed, all the completed training tasks contain gross errors, additional independent work on the course material will not lead to any significant improvement in the quality of the training tasks.

Modern remediation technologies / Современные технологии рекультивации

Set of tasks for calculation and graphic work, simulator training

Task (assignment) 1 calculation of the possibility of discharging wastewater from the workshop into a flowing water body for household purposes without preliminary treatment

Task (assignment) 2 Calculation of the main parameters of the municipal solid waste landfill

Task (assignment) 3 Calculation of landfill gas emissions generated during the disposal of municipal solid waste

Task (assignment) 4 the choice of technology when creating a vegetation cover on disturbed lands is

Questions to prepare for the certification test in the discipline “Nature Protection and Accumulated Environmental Damage (AED) Elimination Tools”:

1) What technological solutions are NOT used in the rehabilitation of NEU facilities?
2) What is composting?
3) What methods include the use of biocells (biopills)?
4) What does Phytorehabilitation include?

5) What do ex situ technologies include?
6) What is Controlled Natural Self-Cleansing?
7) What does on-site technology include?
8) The possibility of effective application of technological solutions for the liquidation of objects (NEU) depends on..?
9) What is the object of accumulated environmental damage? Definition
10) Do we have natural substances that pollute water bodies?
11) What is the main difference between a sanitary landfill and a permitted landfill?
12) Creating vegetation cover on disturbed lands is...?
13) What is Restoration of Disturbed Lands called?
14) Which method of processing organic waste is NOT biotechnological?
15) What methods relate to thermal waste processing?
16) The most important criterion for establishing the priority of actions to liquidate a specific AED facility.

Response Evaluation Criteria	**Points**		
	The answer partially meets the criterion	**The answer partially meets the criterion**	**The answer fully meets the criterion**
The student gives an answer without leading questions from the teacher	0-2	1-3	3
The student practically does not use the prepared answer manuscript	0-2	1-3	3
The answer shows the teacher's confident knowledge of the terminological and methodological apparatus of the discipline/module	0-2	1-3	3
The answer has a clear logical structure	0-2	1-3	3
The answer shows the student's understanding of the connections between the subject of the question and other sections of the discipline/module and/or other disciplines/modules of the EP	0-2	1-3	3
ИТОГО			**15**

DEVELOPER:
Associate Professor of the EM Department **Kapralova D.O.**

Position Signature Name, Surname

HEAD OF DEPARTMENT:
Director of the EM Department **Kucher D.E.**

Position Signature Name, Surname

HEAD OF PROGRAMME:
Associate Professor of the EM Department **Kapralova D.O.**

Position Signature Name, Surname