

МИНОБРНАУКИ РОССИИ

**Федеральное государственное автономное образовательное
учреждение высшего образования "Пермский
государственный национальный исследовательский
университет"**

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Программа производственной практики

UNDERGRADUATE PRACTICE

Код УМК 95074

Утверждено
Протокол №8
от «17» мая 2021 г.

Пермь, 2021

1. Вид практики, способ и форма проведения практики

Вид практики **производственная**

Тип практики **преддипломная практика**

Способ проведения практики **стационарная, выездная**

Форма (формы) проведения практики **дискретная**

2. Место практики в структуре образовательной программы

Производственная практика « Undergraduate practice » входит в обязательную часть Блока « Б.2 » образовательной программы по направлениям подготовки (специальностям):

Направление: **05.03.06** Экология и природопользование

направленность Экологическая инженерия и новая энергетика

Цель практики :

Consolidation of theoretical knowledge gained in the course of studying at the university, development of skills and skills of applying them in practice, information and analytical preparation for writing the final qualification work

Задачи практики :

- 1) To deepen the acquaintance with the structure and content of the organization's activities in order to consolidate the knowledge gained in the disciplines of the specialty;
- 2) To systemat consolidation and expansion of practical skills;
- 3) To develop the ability to work independently in solving the problems set in the final work;
- 4) To collect necessary materials and documents for the implementation of the final work;
- 5) To study of literature on the topic of the final work, improving the ability to work with literature and documentation;
- 6) To develop methods for analyzing environmental information and finding solutions to the tasks set in the final work.

3. Перечень планируемых результатов обучения

В результате прохождения практики **Undergraduate practice** у обучающегося должны быть сформированы следующие компетенции:

05.03.06 Экология и природопользование (направленность : Экологическая инженерия и новая энергетика)

ПК.1 Способен осуществлять выполнение экспериментов и оформление результатов исследований и разработок

Индикаторы

ПК.1.1 Постановка, планирование и решение научно-исследовательских задач по закреплённой тематике

ПК.1.2 Использует в профессиональной деятельности экспериментальные и полевые методы научного исследования

ПК.1.3 Анализирует, интерпретирует, обобщает полученные научные данные, представляет в виде отчетов, обзоров, научных работ

ПК.10 Способен разрабатывать и внедрять мероприятия, направленные на выполнение требований в области охраны окружающей среды, внедрению системы экологического менеджмента, разработке и функционировании системы экологического мониторинга, предупреждения возникновения чрезвычайных ситуаций природного и техногенного характера

Индикаторы

ПК.10.1 Разрабатывает план мероприятий по управлению и усовершенствованию природопользования, направленных на выполнение требований нормативных правовых актов в области охраны окружающей среды с учетом передового опыта отечественных и зарубежных компаний по повышению экологической безопасности

ПК.10.2 Внедряет систему экологического менеджмента, экологического мониторинга, разрабатывает план мероприятий по предупреждению возникновения чрезвычайных ситуаций природного и техногенного характера

ПК.5 Способен разрабатывать проекты и осуществлять контроль загрязнения атмосферного воздуха, водных объектов и образования отходов на предприятии

Индикаторы

ПК.5.1 Разрабатывает проекты в области нормирования загрязнения атмосферного воздуха, водных объектов и образования отходов

ПК.5.2 Осуществляет контроль в области нормирования загрязнения атмосферного воздуха, водных объектов и образования отходов и оценивает степень ущерба и деградации природной среды от хозяйственной деятельности

ПК.6 Способен создавать, внедрять и осуществлять контроль системы производственного экологического контроля на предприятии

Индикаторы

ПК.6.1 Контролирует состояние окружающей среды в районе расположения хозяйственных объектов и разрабатывает программу производственного экологического мониторинга

ПК.6.2 Разрабатывает документацию для соблюдения или достижения нормативов допустимого воздействия на окружающую среду

ПК.6.3 Участвует в контрольно-ревизионной деятельности и в экологическом аудите, разрабатывает проекты повышения экологической эффективности в организации

ПК.6.4 Разрабатывает план мероприятий по охране окружающей среды и контролирует его реализацию на предприятии

ПК.7 Способен оценивать состояние окружающей среды для различных целей (экологический

мониторинг, оценка состояния отдельных компонентов природной среды, проведение инженерно-экологических изысканий, ОВОС) и на основе полученных данных разрабатывать рекомендации по использованию природных ресурсов, сохранению и восстановлению окружающей и природной среды

Индикаторы

ПК.7.1 Планирует, организует и проводит работы по экологическому мониторингу, оценке состояния природной среды, проведению инженерно-экологических изысканий и ОВОС

ПК.7.2 Оценивает состояние отдельных компонентов природной среды: атмосферного воздуха, подземных и поверхностных вод, почв и недр, растительного и животного мира

ПК.7.3 Разрабатывает практические рекомендации по использованию природных ресурсов, сохранению и восстановлению окружающей и природной среды

ПК.8 Способен разрабатывать экологическую документацию организации в соответствии с установленными требованиями в области охраны окружающей среды, в том числе нормативы предельно допустимого воздействия

Индикаторы

ПК.8.1 Разрабатывает проекты нормативов предельно допустимого воздействия на окружающую среду с целью обеспечения экологической безопасности с учетом специфики работы организации

ПК.8.2 Готовит экологическую документацию и отчетность по результатам производственного экологического контроля, определяет наилучшие доступные технологии, проектирует и проводит мероприятия по охране окружающей и природной среды

ПК.8.3 Выявляет источники, виды и масштабы техногенного воздействия, планирует мероприятия по профилактике и ликвидации последствий негативного воздействия, в том числе чрезвычайных ситуаций

ПК.9 Способен проектировать и создавать особо охраняемые природные территории, экологическое обустройство, экологические тропы, экологические сети и каркасы

Индикаторы

ПК.9.1 Разрабатывает проекты по созданию особо охраняемых природных территорий

ПК.9.2 Разрабатывает проекты по экологическому обустройству, созданию экологических троп, экологических сетей и каркасов

4. Содержание и объем практики, формы отчетности

Направление подготовки	05.03.06 Экология и природопользование (направленность: Экологическая инженерия и новая энергетика)
форма обучения	очная
№№ триместров, выделенных для прохождения практики	11,12
Объем практики (з.е.)	6
Объем практики (ак.час.)	216
Форма отчетности	Экзамен (12 триместр)

Примерный график прохождения практики

Количество часов	Содержание работ	Место проведения
Undergraduate practice		
216	<p>Undergraduate practice is conducted in the fourth year of study and is carried out in the form of research (practical) work performed by the student within the approved research topic in the field of study and the topic of the final qualification work, taking into account the interests and capabilities of the departments in which it is conducted. The topic of the work can be defined as an independent part of the research work performed within the scientific direction of the graduating department.</p> <p>The content of the practice is determined by the supervisors and is reflected in the individual assignment for pre-graduate practice.</p> <p>The work of bachelors during the internship period is organized in accordance with the logic of work on the final qualification work. In each case, the internship program is changed and supplemented for each student, depending on the nature of the work performed. Pre-graduate practice consists of the preparatory stage, the stage of performing an individual task, the final stage of writing a report and defending the practice report</p> <p>The forms of practical training for persons with disabilities are determined taking into account the peculiarities of psychophysiological development, individual capabilities and the state of health of students. There may be changes in the time frame for passing the current interim certification, namely, an increase in the time for preparing and submitting the practice report is provided.</p>	<p>The place of the practice can be a manufacturing enterprise, a cultural and service institution, environmental firms, protected areas, research organizations, departments and departments of government bodies of the local, regional and federal levels of government, etc., carrying out exploration, design, management or production activities. related to knowledge and skills in the following areas:</p> <ul style="list-style-type: none"> - ecological design; - environmental management and audit; - nature protection and rational nature management; - control of the impact on the components of the environment; - environmental monitoring and production control; - design and operation of protected areas; - assessment of the state of

Количество часов	Содержание работ	Место проведения
		<p>protected areas; - other areas related to the direction of "Ecology and nature management" For students with disabilities and disabilities, alternative places of practice are provided, individually provided, taking into account the recommendations of the psychological, medical and pedagogical commission or the ITU.</p>
1. The preparatory stage of the practice		
12	<p>1. A student who has entered the practice gets acquainted with the structure and activities of the selected institution (enterprise), enters the designated department. 2. Together with the head of the practice, he specifies the forms, types and deadlines for completing the work in accordance with the individual plan (task) of the course. 3. It is determined by the sources of environmental information that it needs to find to perform the tasks of the practice, the methods of its processing and analysis. The forms of practical training for persons with disabilities are determined taking into account the peculiarities of psychophysiological development, individual capabilities and the state of health of students. There may be changes in the time frame for passing the current interim certification, namely, an increase in the time for preparing and submitting the practice report is provided.</p>	<p>It is carried out in a pre-agreed institution (enterprise, organization) that has a contract with PSNIU for internship. For students with disabilities and disabilities, alternative places of practice are provided, individually provided, taking into account the recommendations of the psychological, medical and pedagogical commission or the ITU.</p>
2. The stage of completing the tasks of the individual practice program		
170	<p>As part of the main stage of the practice, the student performs the tasks proposed to him by the supervisor and approved in the individual plan (task) of the practice. Tasks include tasks for collecting, analyzing primary environmental information, systematizing it, and performing basic analytical work, i.e. tasks necessary for high-quality performance of the first and partially second chapters of the final qualification work. Also, the task of the practice at its first stage is associated with the consolidation and use of theoretical knowledge in the field of ecology and nature management, processes and phenomena related to this area, the use of general scientific and special scientific methods to solve certain scientific and applied problems that are important for the work of the organization - the place of practice.</p>	<p>It is carried out in a pre-agreed institution (enterprise, organization) that has a contract with PSNIU for internship. For students with disabilities and disabilities, alternative places of practice are provided, individually provided, taking into account the recommendations of the psychological, medical and pedagogical commission or the ITU.</p>

Количество часов	Содержание работ	Место проведения
3. Final stage (execution of the practice report)		
30	<p>By the end of the internship, the student must collect materials in the form of a list of references, a literary review, analytical data, etc.</p> <p>The student draws up a report on the pre-graduate practice according to the rules and requirements approved by the department. There is a systematization and processing of the received materials. The main conclusions are made and the results of the study are presented.</p>	<p>It is carried out in a pre-agreed institution (enterprise, organization) that has a contract with PSNIU for internship.</p> <p>For students with disabilities and disabilities, alternative places of practice are provided, individually provided, taking into account the recommendations of the psychological, medical and pedagogical commission or the ITU.</p>
4. Defending the practice report		
4	<p>The defense is held on the last day of the practice at a meeting of the commission consisting of 3 members of the Department of Biogeocenology and Nature Protection, within the terms established by the schedule of the educational process and by appointment of the meeting of the departments. During the defense, the student must submit a report and a presentation based on its main provisions, as well as answer all questions that arise from the commission and the audience. The main task of the stage is to assess the formation of a part of the competencies provided for by this stage of pre-graduate practice.</p>	<p>It is carried out in a pre-agreed institution (enterprise, organization) that has a contract with PSNIU for internship.</p> <p>For students with disabilities and disabilities, alternative places of practice are provided, individually provided, taking into account the recommendations of the psychological, medical and pedagogical commission or the ITU.</p>

5. Перечень учебной литературы, необходимой для проведения практики

Основная

1. David Pimentel. Biofuels, Solar and Wind as Renewable Energy Systems. Benefits and Risks. Springer Science+Business Media B.V. 2008. Online ISBN 978-1-4020-8654-0. Текст электронный: // <https://link.springer.com/book/10.1007/978-1-4020-8654-0> <https://link.springer.com/book/10.1007/978-1-4020-8654-0>
2. Tanay Sidki Uyar. Towards 100% Renewable Energy. Techniques, Costs and Regional Case-Studies. Springer International Publishing Switzerland 2017. Online ISBN 978-3-319-45659-1. Текст электронный: // <https://link.springer.com/book/10.1007/978-3-319-45659-1> <https://link.springer.com/book/10.1007/978-3-319-45659-1>

Дополнительная

1. Davide Geneletti, Chiara Cortinovis, Linda Zardo, Blal Adem Esmail: "Planning for Ecosystem Services in Cities", 2020, ISBN 978-3-030-20024-4. [Электронный ресурс]. <https://link.springer.com/book/10.1007/978-3-030-20024-4>
2. David Elliott, Terence Cook. Renewable Energy. From Europe to Africa. The Editor(s) (if applicable) and The Author(s) 2018. Online ISBN 978-3-319-74787-3. Текст электронный: // <https://link.springer.com/book/10.1007/978-3-319-74787-3> <https://link.springer.com/book/10.1007/978-3-319-74787-3>
3. Martin Kaltschmitt, Wolfgang Streicher, Andreas Wiese. Renewable Energy. Technology, and Environment Economics. Springer-Verlag Berlin Heidelberg 2007. Online ISBN 978-3-540-70949-7. Текст электронный: // <https://link.springer.com/book/10.1007/3-540-70949-5> <https://link.springer.com/book/10.1007/3-540-70949-5>

6. Перечень ресурсов сети «Интернет», требуемых для проведения практики

При прохождении практики требуется использование следующих ресурсов сети «Интернет» :

<http://www.permecology.ru/> Nature of the Perm Region

priroda.permkrai.ru/ Ministry of Natural Resources, Forestry and Ecology of the Perm Region

<https://elibrary.ru> Electronic Library

7. Перечень информационных технологий, используемых при проведении практики

Образовательный процесс по практике **Undergraduate practice** предполагает использование следующего программного обеспечения и информационных справочных систем:

Presentation materials (slides on the topics of lectures and practical classes); on-line access to the Electronic Library System (ELS); access to the electronic information and educational environment of the university Internet services and electronic resources (search engines, e-mail, professional thematic chats and forums, audio and video conference systems, online encyclopedias, etc.)

Office application package "LibreOffice". Programs, demonstrations of video materials (player).

Software for the laptop: OS "Alt Education" (Contract No. DS 003-2020).

The discipline does not provide for the use of special software.

При освоении материала и выполнения заданий по дисциплине рекомендуется использование материалов, размещенных в Личных кабинетах обучающихся ЕТИС ПГНИУ (**student.psu.ru**).

При организации дистанционной работы и проведении занятий в режиме онлайн могут использоваться:

система видеоконференцсвязи на основе платформы BigBlueButton (<https://bigbluebutton.org/>).

система LMS Moodle (<http://e-learn.psu.ru/>), которая поддерживает возможность использования текстовых материалов и презентаций, аудио- и видеоконтент, а так же тесты, проверяемые задания, задания для совместной работы.

8. Описание материально-технической базы, необходимой для проведения практики

Audience for group and individual consultations, for intermediate certification-an audience equipped with presentation equipment (projector, screen, laptop) with appropriate software; chalk or marker board.

Independent work: An audience for independent work, equipped with computer equipment with the ability to connect to the Internet, provided with access to the electronic information and educational environment of the university.

Premises of the Scientific Library of PSU.

For field practices - equipment provided by the organization.

Помещения научной библиотеки ПГНИУ для обеспечения самостоятельной работы обучающихся:

1. Научно-библиографический отдел, корп.1, ауд. 142. Оборудован 3 персональными компьютера с доступом к локальной и глобальной компьютерным сетям.

2. Читальный зал гуманитарной литературы, корп. 2, ауд. 418. Оборудован 7 персональными компьютерами с доступом к локальной и глобальной компьютерным сетям.

3. Читальный зал естественной литературы, корп.6, ауд. 107а. Оборудован 5 персональными компьютерами с доступом к локальной и глобальной компьютерным сетям.

4. Отдел иностранной литературы, корп.2 ауд. 207. Оборудован 1 персональным компьютером с доступом к локальной и глобальной компьютерным сетям.

5. Библиотека юридического факультета, корп.9, ауд. 4. Оборудована 11 персональными компьютерами с доступом к локальной и глобальной компьютерным сетям.

6. Читальный зал географического факультета, корп.8, ауд. 419. Оборудован 6 персональными

компьютерами с доступом к локальной и глобальной компьютерным сетям.

Все компьютеры, установленные в помещениях научной библиотеки, оснащены следующим программным обеспечением:

Операционная система ALT Linux;

Офисный пакет Libreoffice.

Справочно-правовая система «КонсультантПлюс»

9. Методические указания для обучающихся по прохождению практики

Students who do not have medical contraindications and have passed targeted instruction at the departments are allowed to practice.

The organization of the practice includes: the presence of an individual plan (task) of the practice, which specifies the purpose and objectives of the practice, its main activities, the need for a certain result. The practice is carried out on the basis of a signed contract between the PSNIU and the organization-the place of practice.

Organizations (places of practice) have environmental specialization, for example, the Ministry of Natural Resources, Forestry and Ecology of the Perm Region, Uralkali, "Kama Basin Water Management", etc. While in practice at the place of practice (organization), the intern needs to become more familiar with the principles, forms, types and methods of work in the field of ecology and nature management, as well as try to use the environmental knowledge gained during the training to analyze and diagnose the organization's activities.

The initiative research or project should correspond to the subject of the organization's activity-the place of practice, be part of its scientific or practical programs, and/or be important for improving its activities. The author's development should also be closely related to the focus of the bachelor's program and, ultimately, contribute to a deeper study of a particular problem of regional development. The student should be able to show their research and design skills in formulating directions for correcting the current situation in one of the aspects of the organization's activities.

The student draws up a report on the production practice in accordance with the rules and requirements approved by the department. There is a systematization and processing of the received materials. The main conclusions are made and the results of the study are presented.

During the defense, the student must disclose the purpose and objectives of the practice, the results obtained, and their possible application in the final qualifying work. In addition, the student must be able to justify, prove and explain the results of their activities during the practice. The performance should not exceed 7 minutes.

Фонды оценочных средств для проведения промежуточной аттестации

Планируемые результаты обучения по практике для формирования компетенции. Индикаторы и критерии их оценивания

ПК.1

Способен осуществлять выполнение экспериментов и оформление результатов исследований и разработок

Компетенция (индикатор)	Планируемые результаты обучения	Критерии оценивания результатов обучения
<p>ПК.1.3 Анализирует, интерпретирует, обобщает полученные научные данные, представляет в виде отчетов, обзоров, научных работ</p>	<p>KNOW the basics of working with scientific data and their presentation. BE ABLE to analyze, interpret and summarize the received scientific data. POSSESS the skills of presenting scientific data in the form of reports, reviews, scientific papers.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the basics of working with scientific data and their presentation. Does not know how to analyze, interpret and generalize the received scientific data. Does not have the skills to present scientific data in the form of reports, reviews, scientific papers.</p> <p style="text-align: center;">Удовлетворительно</p> <p>Superficially knows the basics of working with scientific data and their presentation. He/she is able to analyze, interpret and generalize the received scientific data, but makes gross mistakes. Uncertainly has the skills to present scientific data in the form of reports, reviews, scientific papers.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the basics of working with scientific data and their presentation. He/she is able to analyze, interpret and summarize the received scientific data, but admits inaccuracies. Has the skills to present scientific data in the form of reports, reviews, scientific papers.</p> <p style="text-align: center;">Отлично</p> <p>Knows the basics of working with scientific data and their presentation. He/she is able to analyze, interpret and summarize the received scientific data. Has the skills to present scientific data in the form of reports, reviews, scientific papers.</p>
<p>ПК.1.2 Использует в профессиональной деятельности экспериментальные и</p>	<p>KNOW the features of experimental and field research in the field of ecology and nature management. BE ABLE to apply various</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the specifics of experimental and field research in the field of ecology and nature management. Does not know how to apply various methods of</p>

<p>полевые методы научного исследования</p>	<p>methods of scientific research to solve professional problems. MASTER the methods of primary processing of experimental and field research in the professional field.</p>	<p>Неудовлетворительно scientific research to solve professional problems. Does not know the methods of primary processing of experimental and field research in the professional field.</p> <p>Удовлетворительно Knows some features of experimental and field research in the field of ecology and nature management. He/she is able to apply various methods of scientific research to solve professional problems, but makes gross mistakes. Partially owns the methods of primary processing of experimental and field research in the professional field.</p> <p>Хорошо Knows the peculiarities of experimental and field research in the field of ecology and nature management. He/she is able to apply various methods of scientific research to solve professional problems. He/she knows the methods of primary processing of experimental and field research in the professional field, but makes mistakes.</p> <p>Отлично Knows the peculiarities of experimental and field research in the field of ecology and nature management. He/she is able to apply various methods of scientific research to solve professional problems. He/she is proficient in the methods of primary processing of experimental and field research in the professional field.</p>
<p>ПК.1.1 Постановка, планирование и решение научно- исследовательских задач по закреплённой тематике</p>	<p>KNOW the basics of setting and planning research tasks. BE ABLE to set, plan and solve research tasks on a fixed topic. POSSESS critical thinking skills in planning and solving professional research tasks.</p>	<p>Неудовлетворительно Does not know the basics of setting and planning research tasks. Does not know how to set, plan and solve research tasks on a fixed topic. Does not possess critical thinking skills in planning and solving professional research tasks.</p> <p>Удовлетворительно Knows the basics of setting and planning research tasks. Knows how to set, plan and solve research tasks</p>

		<p style="text-align: center;">Удовлетворительно</p> <p>on a fixed topic, but makes gross mistakes Uncertainly possesses critical thinking skills in planning and solving professional research tasks.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the basics of setting and planning research tasks. He/she is able to set, plan and solve research tasks on a fixed topic, but admits inaccuracies. Possesses critical thinking skills in planning and solving professional research tasks, but has minor difficulties.</p> <p style="text-align: center;">Отлично</p> <p>Knows the basics of setting and planning research tasks. He/she is able to set, plan and solve research tasks on a fixed topic. Possesses critical thinking skills in planning and solving professional research tasks.</p>
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ПК.6

Способен создавать, внедрять и осуществлять контроль системы производственного экологического контроля на предприятии

Компетенция (индикатор)	Планируемые результаты обучения	Критерии оценивания результатов обучения
<p>ПК.6.1 Контролирует состояние окружающей среды в районе расположения хозяйственных объектов и разрабатывает программу производственного экологического мониторинга</p>	<p>TO KNOW the peculiarities of the influence of certain economic objects on the components of the environment. BE ABLE to control the state of the environment in the area of the location of economic facilities. HAVE the skills to develop industrial environmental monitoring programs.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the specifics of the influence of certain economic objects on the components of the environment. Does not know how to control the state of the environment in the area of the location of economic objects. Does not have the skills to develop industrial environmental monitoring programs.</p> <p style="text-align: center;">Удовлетворительно</p> <p>Partially knows the peculiarities of the influence of certain economic objects on the components of the environment. He/she is able to control the state of the environment in the area of the location of economic facilities, but makes mistakes. Uncertainly has the skills to develop industrial environmental monitoring programs.</p> <p style="text-align: center;">Хорошо</p> <p>He/she knows the main features of the influence of certain economic objects on the components of the environment.</p>

		<p style="text-align: center;">Хорошо</p> <p>Is able to control the state of the environment in the area of the location of economic objects. Has the skills to develop industrial environmental monitoring programs, but admits inaccuracies.</p> <p style="text-align: center;">Отлично</p> <p>He/she knows the peculiarities of the influence of certain economic objects on the components of the environment. Is able to control the state of the environment in the area of the location of economic objects. Has the skills to develop industrial environmental monitoring programs.</p>
<p>ПК.6.2 Разрабатывает документацию для соблюдения или достижения нормативов допустимого воздействия на окружающую среду</p>	<p>KNOW what the documentation is for compliance with/achievement of acceptable environmental impact standards. BE ABLE to understand and apply laws and other regulatory legal acts when developing documentation. HAVE the skills to develop documentation to comply with or achieve the standards of permissible environmental impact.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know what the documentation is for compliance/achievement of acceptable environmental impact standards. Does not know how to understand and apply laws and other regulatory legal acts when developing documentation. Does not have the skills to develop documentation to comply with or achieve acceptable environmental impact standards.</p> <p style="text-align: center;">Удовлетворительно</p> <p>Knows what the documentation is for compliance/achievement of acceptable environmental impact standards, but makes mistakes. Knows how to understand and apply laws and other regulatory legal acts when developing documentation, but admits inaccuracies. Uncertainly has the skills to develop documentation to comply with or achieve acceptable environmental impact standards.</p> <p style="text-align: center;">Хорошо</p> <p>Knows what the documentation is for compliance/achievement of acceptable environmental impact standards. He/she is able to understand and apply laws and other regulatory legal acts when developing documentation, but has some difficulties. Has basic skills in developing documentation to comply with or achieve acceptable environmental impact standards.</p> <p style="text-align: center;">Отлично</p> <p>Knows what the documentation is for compliance/achievement of acceptable</p>

		<p style="text-align: center;">Отлично</p> <p>environmental impact standards. Is able to understand and apply laws and other regulatory legal acts when developing documentation. Confidently has the skills to develop documentation to comply with or achieve the standards of permissible environmental impact.</p>
<p>ПК.6.4 Разрабатывает план мероприятий по охране окружающей среды и контролирует его реализацию на предприятии</p>	<p>KNOW the basics of environmental management and audit. BE ABLE to develop an action plan for environmental protection at the enterprise. HAVE the skills to control the implementation of the environmental action plan at the enterprise.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the basics of environmental management and audit. Does not know how to develop an action plan for environmental protection at the enterprise. Does not have the skills to control the implementation of the environmental action plan at the enterprise.</p> <p style="text-align: center;">Удовлетворительно</p> <p>Knows some basics of environmental management and audit. He/she is able to develop an action plan for environmental protection at the enterprise, but makes gross mistakes. Superficially has the skills to control the implementation of the environmental action plan at the enterprise.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the basics of environmental management and audit. He/she is able to develop an action plan for environmental protection at the enterprise, but admits inaccuracies. He/she has the skills to control the implementation of the environmental action plan at the enterprise, but is experiencing some difficulties.</p> <p style="text-align: center;">Отлично</p> <p>Knows the basics of environmental management and audit. He/she is able to develop an action plan for environmental protection at the enterprise. Has the skills to control the implementation of the environmental action plan at the enterprise.</p>
<p>ПК.6.3 Участствует в контрольно-ревизионной деятельности и в экологическом аудите,</p>	<p>KNOW the basics of environmental audit. BE ABLE to develop projects to improve environmental efficiency in the organization. POSSESS practical skills related</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the basics of environmental audit. Does not know how to develop projects to improve environmental efficiency in the organization.</p>

<p>разрабатывает проекты повышения экологической эффективности в организации</p>	<p>to the conduct of control and audit activities.</p>	<p>Неудовлетворительно Does not possess practical skills related to the conduct of control and audit activities.</p> <p>Удовлетворительно Knows some basics of environmental audit. Knows how to develop projects to improve environmental efficiency in the organization, but makes gross mistakes. Uncertainly has practical skills related to the conduct of control and audit activities.</p> <p>Хорошо Knows the basics of environmental audit. Knows how to develop projects to improve environmental efficiency in the organization, but admits inaccuracies. Has practical skills related to the conduct of control and audit activities.</p> <p>Отлично Knows the basics of environmental audit. He/she is able to develop projects to improve environmental efficiency in the organization. Has practical skills related to the conduct of control and audit activities.</p>
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ПК.7

Способен оценивать состояние окружающей среды для различных целей (экологический мониторинг, оценка состояния отдельных компонентов природной среды, проведение инженерно-экологических изысканий, ОВОС) и на основе полученных данных разрабатывать рекомендации по использованию природных ресурсов, сохранению и восстановлению окружающей и природной среды

Компетенция (индикатор)	Планируемые результаты обучения	Критерии оценивания результатов обучения
<p>ПК.7.2 Оценивает состояние отдельных компонентов природной среды: атмосферного воздуха, подземных и поверхностных вод, почв и недр, растительного и животного мира</p>	<p>KNOW the criteria for assessing the state of individual components of the natural environment. BE ABLE to assess the state of atmospheric air, underground and surface waters, soils and subsoil, flora and fauna. POSSESS various methods of assessing the state of the components of the natural environment.</p>	<p>Неудовлетворительно Does not know the criteria for assessing the state of individual components of the natural environment. Does not know how to assess the state of atmospheric air, underground and surface waters, soils and subsoil, flora and fauna. Does not know the methods of assessing the state of the components of the natural environment.</p> <p>Удовлетворительно Knows some criteria for assessing the state of individual components of the natural environment. He/she is able to assess the state of atmospheric</p>

		<p style="text-align: center;">Удовлетворительно</p> <p>air, underground and surface waters, soils and subsoil, flora and fauna, but makes significant mistakes. He/she knows the methods of assessing the state of the components of the natural environment superficially.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the criteria for assessing the state of individual components of the natural environment. He/she is able to assess the state of atmospheric air, underground and surface waters, soils and subsoil, flora and fauna, but admits some inaccuracies. Owns various methods of assessing the state of the components of the natural environment, but admits some inaccuracies.</p> <p style="text-align: center;">Отлично</p> <p>Knows the criteria for assessing the state of individual components of the natural environment. He/she is able to assess the state of atmospheric air, underground and surface waters, soils and subsoil, flora and fauna. Owns various methods of assessing the state of the components of the natural environment.</p>
<p>ПК.7.1 Планирует, организует и проводит работы по экологическому мониторингу, оценке состояния природной среды, проведению инженерно-экологических изысканий и ОВОС</p>	<p>KNOW the basic requirements for environmental monitoring, assessment of the state of the natural environment, engineering and environmental surveys and EIA. BE ABLE to plan field, laboratory and desk work within the framework of environmental monitoring, environmental assessment, engineering and environmental surveys and EIA. POSSESS the skills of organizing work on environmental monitoring, assessment of the state of the natural environment, conducting engineering and environmental surveys and EIA.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the basic requirements for environmental monitoring, assessment of the state of the natural environment, engineering and environmental surveys and EIA. Does not know how to plan field, laboratory and desk work within the framework of environmental monitoring, environmental assessment, engineering and environmental surveys and EIA. Does not have the skills to organize work on environmental monitoring, assessment of the state of the natural environment, conducting engineering and environmental surveys and EIA.</p> <p style="text-align: center;">Удовлетворительно</p> <p>He/she knows only some of the requirements for environmental monitoring, assessment of the state of the natural environment, engineering and environmental surveys and EIA. He/she is able to plan field, laboratory and desk work within the framework of environmental</p>

		<p style="text-align: center;">Удовлетворительно</p> <p>monitoring, environmental assessment, engineering and environmental surveys and EIA, but makes gross mistakes. He/she is unsure of the skills of organizing work on environmental monitoring, assessing the state of the natural environment, conducting engineering and environmental surveys and EIA.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the basic requirements for environmental monitoring, assessment of the state of the natural environment, engineering and environmental surveys and EIA, but admits inaccuracies. He/she is able to plan field, laboratory and desk work within the framework of environmental monitoring, assessment of the state of the natural environment, engineering and environmental surveys and EIA. He/she has basic skills in organizing work on environmental monitoring, assessment of the state of the natural environment, conducting engineering and environmental surveys and EIA.</p> <p style="text-align: center;">Отлично</p> <p>Knows the basic requirements for environmental monitoring, assessment of the state of the natural environment, engineering and environmental surveys and EIA. He/she is able to plan field, laboratory and desk work within the framework of environmental monitoring, assessment of the state of the natural environment, engineering and environmental surveys and EIA. Confidently possesses the skills of organizing work on environmental monitoring, assessment of the state of the natural environment, conducting engineering and environmental surveys and EIA.</p>
<p>ПК.7.3 Разрабатывает практические рекомендации по использованию природных ресурсов, сохранению и восстановлению окружающей и природной среды</p>	<p>KNOW the basic principles of rational use of natural resources, conservation and restoration of the natural environment. BE ABLE to develop practical recommendations for the rational use of natural resources. HAVE the skills to make recommendations for the preservation and restoration of the</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the basic principles of rational use of natural resources, conservation and restoration of the natural environment. Does not know how to develop practical recommendations for the rational use of natural resources. Does not have the skills to make recommendations for the preservation and restoration of the natural environment.</p>

	natural environment.	<p style="text-align: center;">Удовлетворительно</p> <p>Knows some principles of rational use of natural resources, conservation and restoration of the natural environment. He/she is able to develop practical recommendations on the rational use of natural resources, but makes significant mistakes. Uncertainly has the skills to make recommendations for the preservation and restoration of the natural environment.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the basic principles of rational use of natural resources, conservation and restoration of the natural environment. He/she is able to develop practical recommendations on the rational use of natural resources, but admits inaccuracies. Has the skills to make recommendations for the preservation and restoration of the natural environment, but admits inaccuracies.</p> <p style="text-align: center;">Отлично</p> <p>Knows the basic principles of rational use of natural resources, conservation and restoration of the natural environment. He/she is able to develop practical recommendations for the rational use of natural resources. Has the skills to make recommendations for the preservation and restoration of the natural environment.</p>
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ПК.5

Способен разрабатывать проекты и осуществлять контроль загрязнения атмосферного воздуха, водных объектов и образования отходов на предприятии

Компетенция (индикатор)	Планируемые результаты обучения	Критерии оценивания результатов обучения
<p>ПК.5.2 Осуществляет контроль в области нормирования загрязнения атмосферного воздуха, водных объектов и образования отходов и оценивает степень ущерба и деградации природной среды от</p>	<p>KNOW regulatory legal acts that establish requirements for the quality control of atmospheric air, water bodies and waste generation. BE ABLE to assess the degree of damage and degradation of the natural environment from economic activity. HAVE the skills to develop control programs for</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know regulatory legal acts that establish requirements for quality control of atmospheric air, water bodies and waste generation. Does not know how to assess the degree of damage and degradation of the natural environment from economic activity. Does not have the skills to develop control programs for environmental components.</p> <p style="text-align: center;">Удовлетворительно</p>

<p>хозяйственной деятельности</p>	<p>environmental components.</p>	<p>Удовлетворительно Knows some regulatory legal acts that establish requirements for the quality control of atmospheric air, water bodies and waste generation. He/she is able to assess the degree of damage and degradation of the natural environment from economic activity, but makes gross mistakes. Uncertainly has the skills to develop control programs for environmental components.</p> <p>Хорошо Knows the main regulatory legal acts that establish requirements for the quality control of atmospheric air, water bodies and waste generation. He/she is able to assess the degree of damage and degradation of the natural environment from economic activity, but admits inaccuracies. Has basic skills in developing control programs for environmental components.</p> <p>Отлично Knows regulatory legal acts that establish requirements for the quality control of atmospheric air, water bodies and waste generation. He/she is able to assess the degree of damage and degradation of the natural environment from economic activity. Confidently has the skills to develop control programs for environmental components.</p>
<p>ПК.5.1 Разрабатывает проекты в области нормирования загрязнения атмосферного воздуха, водных объектов и образования отходов</p>	<p>KNOW the basic documents in the field of regulation of air pollution, water bodies, waste generation. BE ABLE to develop projects in the field of regulation of air pollution, water bodies and waste generation. OWN the procedure for rationing and controlling emissions, discharges and waste generation.</p>	<p>Неудовлетворительно Does not know the basic documents in the field of regulation of air pollution, water bodies, waste generation. Does not know how to develop projects in the field of regulation of air pollution, water bodies and waste generation. Does not know the procedure for rationing and controlling emissions, discharges and waste generation.</p> <p>Удовлетворительно Superficially knows the basic documents in the field of regulation of air pollution, water bodies, waste generation. He/she is able to develop projects in the field of regulation of atmospheric air pollution, water bodies and waste generation, but makes gross mistakes.</p>

		<p style="text-align: center;">Удовлетворительно</p> <p>Owns the procedure for rationing and controlling emissions, discharges and waste generation, but admits inaccuracies.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the main documents in the field of regulation of air pollution, water bodies, waste generation. He/she is able to develop projects in the field of regulation of air pollution, water bodies and waste generation, but has some difficulties. Owns the procedure for rationing and controlling emissions, discharges and waste generation, but admits inaccuracies.</p> <p style="text-align: center;">Отлично</p> <p>Knows the main documents in the field of regulation of air pollution, water bodies, waste generation. He/she is able to develop projects in the field of regulation of atmospheric air pollution, water bodies and waste generation. Owns the procedure for rationing and controlling emissions, discharges and waste generation.</p>
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ПК.10

Способен разрабатывать и внедрять мероприятия, направленные на выполнение требований в области охраны окружающей среды, внедрению системы экологического менеджмента, разработке и функционировании системы экологического мониторинга, предупреждения возникновения чрезвычайных ситуаций природного и техногенного характера

Компетенция (индикатор)	Планируемые результаты обучения	Критерии оценивания результатов обучения
<p>ПК.10.2 Внедряет систему экологического менеджмента, экологического мониторинга, разрабатывает план мероприятий по предупреждению возникновения чрезвычайных ситуаций природного и техногенного характера</p>	<p>KNOW the terminology of environmental management, environmental monitoring, have an idea of natural and man-made emergencies. BE ABLE to implement an environmental management system, environmental monitoring. HAVE the skills to develop an action plan to prevent the occurrence of natural and man-made emergencies.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the terminology of environmental management, environmental monitoring, has no idea about natural and man-made emergencies. Does not know how to implement an environmental management system, environmental monitoring. Does not have the skills to develop an action plan to prevent the occurrence of natural and man-made emergencies.</p> <p style="text-align: center;">Удовлетворительно</p> <p>Partially knows the terminological apparatus of environmental management, environmental</p>

		<p style="text-align: center;">Удовлетворительно</p> <p>monitoring, has an idea of natural and man-made emergencies. Knows how to implement an environmental management system, environmental monitoring, but makes gross mistakes. Uncertainly has the skills to develop an action plan to prevent the occurrence of natural and man-made emergencies.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the terminological apparatus of environmental management, environmental monitoring, has an idea of natural and man-made emergencies. Knows how to implement an environmental management system, environmental monitoring, but admits inaccuracies. Has some skills in developing an action plan to prevent the occurrence of natural and man-made emergencies.</p> <p style="text-align: center;">Отлично</p> <p>Knows the terminological apparatus of environmental management, environmental monitoring, has an idea of natural and man-made emergencies. Knows how to implement an environmental management system, environmental monitoring. Has the skills to develop an action plan to prevent the occurrence of natural and man-made emergencies.</p>
<p>ПК.10.1 Разрабатывает план мероприятий по управлению и усовершенствованию природопользования, направленных на выполнение требований нормативных правовых актов в области охраны окружающей среды с учетом передового опыта отечественных и зарубежных компаний по повышению экологической безопасности</p>	<p>KNOW the best practices of domestic and foreign companies to improve environmental safety. BE ABLE to develop an action plan for the management and improvement of environmental management. POSSESS the requirements of regulatory legal acts in the field of environmental protection.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the best practices of domestic and foreign companies to improve environmental safety. Does not know how to develop an action plan for the management and improvement of environmental management. Does not know the requirements of regulatory legal acts in the field of environmental protection.</p> <p style="text-align: center;">Удовлетворительно</p> <p>Superficially knows the best practices of domestic and foreign companies to improve environmental safety. He/she is able to develop an action plan for the management and improvement of environmental management, but makes gross mistakes. Partially owns the requirements of regulatory</p>

		<p>Удовлетворительно legal acts in the field of environmental protection.</p> <p>Хорошо Knows the best practices of domestic and foreign companies to improve environmental safety. Knows how to develop an action plan for the management and improvement of environmental management, but makes mistakes. Owns the requirements of regulatory legal acts in the field of environmental protection.</p> <p>Отлично Knows the best practices of domestic and foreign companies to improve environmental safety. Is able to develop an action plan for the management and improvement of environmental management. Owns the requirements of regulatory legal acts in the field of environmental protection.</p>
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ПК.8

Способен разрабатывать экологическую документацию организации в соответствии с установленными требованиями в области охраны окружающей среды, в том числе нормативы предельно допустимого воздействия

Компетенция (индикатор)	Планируемые результаты обучения	Критерии оценивания результатов обучения
<p>ПК.8.3 Выявляет источники, виды и масштабы техногенного воздействия, планирует мероприятия по профилактике и ликвидации последствий негативного воздействия, в том числе чрезвычайных ситуаций</p>	<p>KNOW the basics of planning measures for the prevention and elimination of the consequences of negative impacts. BE ABLE to identify the sources, types, and scale of man-made impacts. HAVE the skills to develop preventive measures to reduce the level of hazards of various types, as well as the development of measures to eliminate the consequences of negative impacts, including emergencies.</p>	<p>Неудовлетворительно Does not know the basics of planning measures for the prevention and elimination of the consequences of negative impacts. Does not know how to identify the sources, types, and scale of man-made impacts. Does not have the skills to develop preventive measures to reduce the level of hazards of various types, as well as the development of measures to eliminate the consequences of negative impacts, including emergencies.</p> <p>Удовлетворительно Knows the basics of planning measures for the prevention and elimination of the consequences of negative impacts, but makes gross mistakes. He/she is able to identify the sources, types, and scale of man-made impacts, but admits inaccuracies. Uncertainly has the skills to develop preventive</p>

		<p style="text-align: center;">Удовлетворительно</p> <p>measures to reduce the level of hazards of various types, as well as the development of measures to eliminate the consequences of negative impacts, including emergencies.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the basics of planning measures to prevent and eliminate the consequences of negative impacts, but admits inaccuracies. It is able to identify the sources, types, and scale of man-made impacts. Has the skills to develop preventive measures to reduce the level of hazards of various types, as well as the development of measures to eliminate the consequences of negative impacts, including emergencies, but has some difficulties.</p> <p style="text-align: center;">Отлично</p> <p>Knows the basics of planning measures to prevent and eliminate the consequences of negative impacts. It is able to identify the sources, types, and scale of man-made impacts. Has the skills to develop preventive measures to reduce the level of hazards of various types, as well as the development of measures to eliminate the consequences of negative impacts, including emergencies.</p>
<p>ПК.8.2 Готовит экологическую документацию и отчетность по результатам производственного экологического контроля, определяет наилучшие доступные технологии, проектирует и проводит мероприятия по охране окружающей и природной среды</p>	<p>KNOW the specifics of preparing environmental documentation and reporting on the results of industrial environmental control. BE ABLE to identify the best available technologies that can be used in different industries. POSSESS the skills of designing and carrying out measures to protect the environment and the natural environment.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the specifics of preparing environmental documentation and reporting on the results of industrial environmental control. Does not know how to determine the best available technologies that can be used in different industries. Does not possess the skills of designing and carrying out measures to protect the environment and the natural environment.</p> <p style="text-align: center;">Удовлетворительно</p> <p>Knows some features of the preparation of environmental documentation and reporting on the results of industrial environmental control. He/she is able to determine the best available technologies that can be used in various industries, but makes gross mistakes. Superficially has the skills of designing and carrying out measures to protect the environment and the natural environment.</p>

		<p style="text-align: center;">Хорошо</p> <p>Knows the specifics of preparing environmental documentation and reporting on the results of industrial environmental control. He/she is able to determine the best available technologies that can be used in various industries, but admits inaccuracies. Has basic skills in designing and conducting environmental and environmental protection activities.</p> <p style="text-align: center;">Отлично</p> <p>Knows the specifics of preparing environmental documentation and reporting on the results of industrial environmental control. He/she is able to determine the best available technologies that can be used in various industries. Confidently possesses the skills of designing and carrying out measures to protect the environment and the natural environment.</p>
<p>ПК.8.1 Разрабатывает проекты нормативов предельно допустимого воздействия на окружающую среду с целью обеспечения экологической безопасности с учетом специфики работы организации</p>	<p>KNOW the specifics of the organization's work when developing draft standards for maximum permissible exposure. BE ABLE to apply knowledge of environmental legislation when developing projects. HAVE the skills to develop draft standards of maximum permissible environmental impact.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the specifics of the organization's work when developing draft standards for maximum permissible exposure. Does not know how to apply knowledge of environmental legislation in the development of projects. Does not have the skills to develop draft standards for maximum permissible environmental impact.</p> <p style="text-align: center;">Удовлетворительно</p> <p>Knows the specifics of the organization's work when developing draft standards for maximum permissible exposure, but admits inaccuracies. He/she is able to apply the knowledge of environmental legislation in the development of projects, but makes gross mistakes. Superficially has the skills to develop draft standards of maximum permissible environmental impact.</p> <p style="text-align: center;">Хорошо</p> <p>Knows the specifics of the organization's work when developing draft standards for maximum permissible exposure. Knows how to apply knowledge of environmental legislation in the development of projects, but admits inaccuracies. Has basic skills in developing draft standards of</p>

		<p style="text-align: center;">Хорошо</p> <p>maximum permissible environmental impact.</p> <p style="text-align: center;">Отлично</p> <p>Knows the specifics of the organization's work when developing draft standards for maximum permissible exposure.</p> <p>He/she is able to apply knowledge of environmental legislation in the development of projects.</p> <p>Confidently has the skills to develop draft standards of maximum permissible environmental impact.</p>
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ПК.9

Способен проектировать и создавать особо охраняемые природные территории, экологическое обустройство, экологические тропы, экологические сети и каркасы

Компетенция (индикатор)	Планируемые результаты обучения	Критерии оценивания результатов обучения
<p>ПК.9.1 Разрабатывает проекты по созданию особо охраняемых природных территорий</p>	<p>KNOW the theoretical foundations of conservation work.</p> <p>BE ABLE to collect and process information necessary for the development of a protected area project.</p> <p>POSSESS the skills of using modern software in the design of protected areas and their systems.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the theoretical foundations of the conservation business.</p> <p>Does not know how to collect and process information necessary for the development of a protected area project.</p> <p>Does not have the skills to use modern software in the design of protected areas and their systems.</p> <p style="text-align: center;">Удовлетворительно</p> <p>He/she knows only part of the theoretical foundations of the conservation business.</p> <p>Is able to collect, but is not able to process the information necessary for the development of a protected area project.</p> <p>He/she has only some skills of using modern software in the design of protected areas and their systems.</p> <p style="text-align: center;">Хорошо</p> <p>Knows most of the theoretical foundations of the conservation business.</p> <p>He/she is able to collect and process information necessary for the development of a protected area project, making some mistakes.</p> <p>He/she has the basic skills of using modern software in the design of protected areas and their systems.</p> <p style="text-align: center;">Отлично</p> <p>Knows the theoretical foundations of the conservation business.</p>

		<p style="text-align: center;">Отлично</p> <p>Is able to collect and process information necessary for the development of a protected area project.</p> <p>Has basic and special skills of using modern software in the design of protected areas and their systems.</p>
<p>ПК.9.2 Разрабатывает проекты по экологическому обустройству, созданию экологических троп, экологических сетей и каркасов</p>	<p>KNOW the theoretical foundations of designing ecological paths, ecological networks and frames.</p> <p>BE ABLE to collect and process information necessary for the development of an ecological paths project, an ecological network and a frames.</p> <p>POSSESS the skills of direct field research, spatial analysis, identification of economic, social, legal aspects.</p>	<p style="text-align: center;">Неудовлетворительно</p> <p>Does not know the theoretical foundations of territorial nature protection and recreational geography.</p> <p>Not able to collect and process information necessary for the development of a project for an ecological path, ecological network and frames.</p> <p>Does not possess the skills of direct field research, spatial analysis, identification of economic, social, legal aspects.</p> <p style="text-align: center;">Удовлетворительно</p> <p>Knows only a part of the theoretical foundations of the design of ecological paths, ecological networks and frames.</p> <p>Knows how to collect, but does not know how to process the information necessary for the development of a project for an ecological path, ecological network and frames.</p> <p>Possesses only some skills of direct field research, spatial analysis, identification of economic, social, legal aspects.</p> <p style="text-align: center;">Хорошо</p> <p>Knows most of the theoretical foundations for the design of ecological paths, ecological networks and frames.</p> <p>He/she is able to collect and process the information necessary for the development of a project of an ecological path, ecological network and frames, making some mistakes.</p> <p>Possesses the basic skills of direct field research, spatial analysis, identification of economic, social, legal aspects.</p> <p style="text-align: center;">Отлично</p> <p>Knows the theoretical foundations of the design of ecological paths, ecological networks and frames.</p> <p>He/she is able to collect and process information necessary for the development of a project for an ecological path, ecological network and frames.</p>

		Отлично Possesses the skills of direct field research, spatial analysis, identification of economic, social, legal aspects.
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Оценочные средства

Вид мероприятия промежуточной аттестации : Экзамен

Способ проведения мероприятия промежуточной аттестации : Защищаемое контрольное мероприятие

Продолжительность проведения мероприятия промежуточной аттестации :
время отводимое на доклад 4

Показатели оценивания

Does not know how to make a program of field, laboratory and desk work, does not know the methods of field and laboratory environmental research, the skills of interpretation and development of recommendations.	Неудовлетворительно
He/she is able to draw up a program of field work, knows the methods of field research, the skills of interpretation and development of recommendations.	Удовлетворительно
He/she is able to draw up a program of field and desk work, knows the methods of field environmental research, the skills of interpretation and development of recommendations.	Хорошо
He/she is able to draw up a program of field, laboratory and desk work, knows the methods of field and laboratory environmental research, the skills of interpretation and development of recommendations.	Отлично