# МИНИСТЕРСТВО СЕЛЬСКОГО ХОЗЯЙСТВА РОССИЙСКОЙ ФЕДЕРАЦИИ Федеральное государственное бюджетное образовательное учреждение высшего образования

# «КУБАНСКИЙ ГОСУДАРСТВЕННЫЙ АГРАРНЫЙ УНИВЕРСИТЕТ имени И.Т. ТРУБИЛИНА»

# Факультет агрономии и экологии Иностранных языков



УТВЕРЖДЕНО Декан Макаренко А.А. Протокол от 28.04.2025 № 19

# РАБОЧАЯ ПРОГРАММА ДИСЦИПЛИНЫ (МОДУЛЯ) «ПРОФЕССИОНАЛЬНЫЙ ИНОСТРАННЫЙ ЯЗЫК»

Уровень высшего образования: магистратура

Направление подготовки: 05.04.06 Экология и природопользование

Направленность (профиль)подготовки: Экологическое проектирование и экспертиза

Квалификация (степень) выпускника: магистр

Форма обучения: очная

Год набора (приема на обучение): 2025

Срок получения образования: 2 года

Объем: в зачетных единицах: 2 з.е.

в академических часах: 72 ак.ч.

# Разработчики:

Доцент, кафедра иностранных языков Степанова А.П.

Рабочая программа дисциплины (модуля) составлена в соответствии с требованиями ФГОС ВО по направлени ю подготовки 05.04.06 Экология и природопользование, утвержденного приказом Минобрнауки от 07.08.2020 № 897, с учетом трудовых функций профессиональных стандартов: "Специалист по экологической безопасности (в промышленности)", утвержден приказом Минтруда России от 07.09.2020 № 569н.

Согласование и утверждение

№	Подразделение или коллегиальный орган	Ответственное лицо	ФИО	Виза	Дата, протокол (при наличии)
1	Факультет агрономии и экологии	Председатель методической комиссии/совет а	Бойко Е.С.	Согласовано	24.04.2025, № 14
2	Иностранных языков	Заведующий кафедрой, руководитель подразделения, реализующего ОП	Непшекуева Т.С.	Согласовано	28.04.2025, № 8

#### 1. Цель и задачи освоения дисциплины (модуля)

Цель освоения дисциплины - Целью освоения дисциплины «Профессиональный иностранный язык» (англий-ский) является формирование комплекса знаний об организационных, научных и методи-ческих основах в совершенной степени владеть иностранным языком и наиболее полно использовать его в научной работе.

Задачи изучения дисциплины:

- - систематически следить за иноязычной научной и технической информацией по соответствующему профилю; ;
- - свободно читать и понимать зарубежные первоисточники по своей специально-сти и извлекать из них необходимые сведения; ;
- - оформлять извлечённую информацию в удобную для пользования форму в виде аннотаций, переводов, рефератов и т.п;
- - вести беседу на иностранном языке, связанную с научной работой и повседнев-ной жизнью.;
- – восстановить базовые знания, полученные на 1-2-м курсах общеуниверситетско-го обучения.;
- - сформировать навыки аннотирования, конспектирования, реферирования.;
- обучить навыкам беглого чтения, быстрого предварительного просмотра, извле-чения основной темы, идеи, информации, выстраивания отдельных фактов в логической последовательности, их оценки, краткого изложения и др.;
- - сформировать умения правильного построения связного монологического выска-зывания на иностранном языке;
- развивать навыки самостоятельной работы в режиме информационного поиска в Интернет. Оптимальное количество времени, затрачиваемое на работу в Интернет, со-ставляет в среднем 1-1,5 часа в неделю;
- реализовывать навыки чтения по заголовкам, просмотрового и поискового чте-ния статей для занятий и изучающего чтения дома ;
- стимулировать самостоятельную творческую работу обучающихся при мини-мальном контроле со стороны преподавателя;
- - активизировать все навыки соответствующих видов речевой деятельности. .

# 2. Планируемые результаты обучения по дисциплине (модулю), соотнесенные с планируемыми результатами освоения образовательной программы

Компетенции, индикаторы и результаты обучения

УК-4 Способен применять современные коммуникативные технологии, в том числе на иностранном(ых) языке(ах), для академического и профессионального взаимодействия

УК-4.1 Демонстрирует интегративные умения, необходимые для написания, письменного перевода и редактирования различных академических текстов (рефератов, эссе, обзоров, статей т.д.)

Знать:

УК-4.1/Зн1 Интегративные умения, необходимые для написания, письменного перевода и редактирования различных академических текстов (рефератов, эссе, обзоров, статей и т.д.)

Уметь:

УК-4.1/Ум1 Демонстрировать интегративные умения, необходимые для написания, письменного перевода и редактирования различных академических текстов (рефератов, эссе, обзоров, статей и т.д.)

Владеть:

УК-4.1/Нв1 Способностью интегративного умения, необходимого для написания, письменного перевода и редактирования различных академических текстов (рефератов, эссе, обзоров, статей и т.д.)

УК-4.2 Представляет результаты академической и профессиональной деятельности на различных научных мероприятиях, включая международные

Знать:

УК-4.2/Зн1 Результаты академической и профессиональной деятельности на различных научных мероприятиях, включая международные

Уметь:

УК-4.2/Ум1 Представлять результаты академической и профессиональной деятельности на различных научных мероприятиях, включая международные *Владеть*:

УК-4.2/Нв1 Способностью представлять результаты академической и профессиональной деятельности на различных научных мероприятиях, включая международные

УК-4.3 Демонстрирует интегративные умения, необходимые для эффективного участия в академических и профессиональных дискуссиях

Знать:

УК-4.3/Зн1 Интегративные умения, необходимые для эффективного участия в академических и профессиональных дискуссиях

Уметь:

УК-4.3/Ум1 Демонстрировать интегративные умения, необходимые для эффективного участия в академических и профессиональных дискуссиях *Владеть*:

УК-4.3/Нв1 Способностью интегративного умения, необходимого для эффективного участия в академических и профессиональных дискуссиях

УК-5 Способен анализировать и учитывать разнообразие культур в процессе межкультурного взаимодействия

УК-5.1 Адекватно объясняет особенности поведения и мотивации людей различного социального и культурного происхождения в процессе взаимодействия с ними, опираясь на знания причин появления социальных обычаев и различий в поведении людей

Знать:

УК-5.1/Зн1 Основы поведения и мотивации людей различного социального и культурного происхождения в процессе взаимодействия с ними, опираясь на знания причин появления социальных обычаев и различий в поведении людей *Уметь*:

УК-5.1/Ум1 Адекватно объяснять особенности поведения и мотивации людей различного социального и культурного происхождения в процессе взаимодействия с ними, опираясь на знания причин появления социальных обычаев и различий в поведении людей

Владеть:

УК-5.1/Нв1 Способностью адекватно объяснять особенности поведения и мотивации людей различного социального и культурного происхождения в процессе взаимодействия с ними, опираясь на знания причин появления социальных обычаев и различий в поведении людей

УК-5.2 Владеет навыками создания недискриминационной среды взаимодействия при выполнении профессиональных задач

Знать:

УК-5.2/Зн1 Основы создания недискриминационной среды взаимодействия при выполнении профессиональных задач

Уметь:

УК-5.2/Ум1 Использовать навыки создания недискриминационной среды взаимодействия при выполнении профессиональных задач *Владеть*:

УК-5.2/Нв1 Способностью использовать навыки создания недискриминационной среды взаимодействия при выполнении профессиональных задач

# 3. Место дисциплины в структуре ОП

Дисциплина (модуль) «Профессиональный иностранный язык» относится к обязательной части образовательной программы и изучается в семестре(ах): 1.

В процессе изучения дисциплины студент готовится к решению типов задач профессиональной деятельности, предусмотренных ФГОС ВО и образовательной программой.

# 4. Объем дисциплины (модуля) и виды учебной работы

Период обучения	Общая трудоемкость (часы)	Общая трудоемкость (ЗЕТ)	Контактная работа (часы, всего)	Внеаудиторная контактная работа (часы)	Зачет (часы)	Практические занятия (часы)	Самостоятельная работа (часы)	Промежуточная аттестация (часы)
Первый семестр	72	2	29	1		28	43	Зачет
Всего	72	2	29	1		28	43	

#### 5. Содержание дисциплины (модуля)

#### 5.1. Разделы, темы дисциплины и виды занятий

(часы промежуточной аттестации не указываются)

Наименование раздела, темы	Всего	Внеаудиторная контактная работа	Практические занятия	Самостоятельная работа	Планируемые результаты обучения, соотнесенные с результатами освоения программы
Раздел 1. Climate change	72	1	28	43	УК-4.1
Тема 1.1. Climate change in black	13	1	5	7	УК-4.2
and white (Reading Bank)					УК-4.3
Тема 1.2. Gerund (Grammar bank)	12		5	7	УК-5.1

Тема 1.3. Planet in danger	12		5	7	УК-5.2
(Reading bank)					
Тема 1.4. Participles (Grammar	12		5	7	
Bank)					
Тема 1.5. Innovation and nature	12		5	7	
(Reading Bank)					
Тема 1.6. Infinitive (Grammar	11		3	8	
Bank)					
Итого	72	1	28	43	

#### 5.2. Содержание разделов, тем дисциплин

#### Раздел 1. Climate change

(Внеаудиторная контактная работа - 1ч.; Практические занятия - 28ч.; Самостоятельная работа - 43ч.)

Тема 1.1. Climate change in black and white (Reading Bank)

(Внеаудиторная контактная работа - 1ч.; Практические занятия - 5ч.; Самостоятельная работа - 7ч.)

Чтение и перевод текстов по теме, выполнение лексико-грамматических заданий

#### Teмa 1.2. Gerund (Grammar bank)

(Практические занятия - 5ч.; Самостоятельная работа - 7ч.)

Изучение грамматическогоматериала, выполнение лексико-грамматических заданий

#### Тема 1.3. Planet in danger (Reading bank)

(Практические занятия - 5ч.; Самостоятельная работа - 7ч.)

Чтение и перевод текстов по теме, выполнение лексико-грамматических заданий

#### Teмa 1.4. Participles (Grammar Bank)

(Практические занятия - 5ч.; Самостоятельная работа - 7ч.)

Выполнение лексико-грамматических заданий

#### Teмa 1.5. Innovation and nature (Reading Bank)

(Практические занятия - 5ч.; Самостоятельная работа - 7ч.)

Чтение и перевод текстов по теме, выполнение лексико-грамматических заданий

#### Teмa 1.6. Infinitive (Grammar Bank)

(Практические занятия - 3ч.; Самостоятельная работа - 8ч.)

выполнение лексико-грамматических заданий

# 6. Оценочные материалы текущего контроля

# Раздел 1. Climate change

Форма контроля/оценочное средство: Задача

Вопросы/Задания:

1. Complete the senteces with appropriate word

.... the planet is one of the goals that countries around the world have set for 2050.

2. Complete the sentece with appropriate word

The transition to sustainable mobility and transport electrification are crucial to halting ...... and saving the planet.

#### 3. Answer the question

What is evaporation?

#### 4. Answer the question

What is the correct term for moisture that falls to the ground from clouds? condensation
\*precipitation

hibernation evaporation

5. Answer the question

From where does most water evaporate?

puddles

rivers

lakes

\*oceans

#### 6. Answer the question

... is the only thing in nature that can be a solid, a liquid, or a gas?

# 7. Answer the question

Where does some water from the water cycle collect underground? aquariums

\*aquifers

aqueducts

aquatic parks

# 8. Put the words in the right order:

Put the words in the right order:

the law

says

that

strictly

liable

for

polluters

the damage

they

cause.

are

In

the

#### **European Community**

# 9. Answer the question

The form of bioremediation in which fungi-based remediation methods are used to decontaminate the environment is:

\*Mycoremediation remediation environmental clean-up

10. Match the synonyms:

```
component = constituent
total = whole
discharge = run-off
supply = delivery
```

11. What minerals are found in the run-off from agricultural land and treated and untreated sewage effluents, which are highly responsible for eutrophication of water bodies?

```
*nitrogen
*phosphorous
phosphorous
carbon
```

12. Answer the question

Which of these contributes to water pollution?

sewers

farms

street runoff

\*all of the above

13. What are the main ways humans are contributing to climate change besides CO<sub>2</sub> emissions?

What are the main ways humans are contributing to climate change besides CO2 emissions?

14. Why are alternative approaches to reducing climate change considered attractive compared to CO<sub>2</sub> reduction?

Why are alternative approaches to reducing climate change considered attractive compared to CO<sub>2</sub> reduction?

15. What are the advantages of reducing black carbon emissions?

What are the advantages of reducing black carbon emissions?

16. How could success in tackling marginal climate issues (like HFCs or black carbon) help broader climate efforts?

It could build trust and momentum for future CO2 reduction agreements.

- 17. Why is reducing CO<sub>2</sub> emissions still essential despite alternative approaches?
- 18. Arrange the following events in the order they are mentioned in the text regarding the Colorado River crisis:
- a) The "bathtub ring" becomes visible due to dropping water levels.
- b) The Colorado River Compact of 1922 establishes water rights.
- c) Las Vegas starts digging a third water intake at 890 feet.
- d) Abandoned buildings from the 1930s resurface as Lake Mead recedes.
- e) The Law of the River allocates more water than the river actually holds.
  - 19. Sequence the steps taken by Las Vegas to address its water crisis:
- a) Implementing low-flow toilets and taps.
- b) Paying residents to replace lawns with desert landscaping.
- c) Drilling a third intake at 890 feet.

- d) Proposing to pipe groundwater from northern Nevada.
  - 20. Put these historical and legal developments in chronological order:
- a) The Colorado River Compact is signed.
- b) The "water wars" era leads to legal battles.
- c) A treaty with Mexico is established.
- d) Case law further refines water rights until the 1960s.
- e) The Law of the River is formed but over-allocates water.
- 21. Arrange these consequences of the Colorado River's decline in the order they appear in the text:
- a) Las Vegas risks losing its water intakes.
- b) Agricultural and urban users compete for dwindling supplies.
- c) The river's flow decreases due to drought and climate change.
- d) Aqueducts divert water to cities like Los Angeles and Phoenix.
- e) Nevada and Arizona create a water-banking partnership.
  - 22. Sequence the cultural and policy changes in the West's water management:
- a) Los Angeles buys water rights from Imperial County farmers.
- b) Nevada incentivizes residents to remove lawns.
- c) The Law of the River's seniority rules create political tensions.
- d) Low-flow fixtures become standard in homes.
  - 23. Найдите соответствие между английскими и русскими терминами
- 1. gasoline
- 2. water pollution
- 3. warehouse
- 4. dam
- 5. carbone dioxide
- а. склад
- б. бензин
- в. загрязнение воды
- г. углекислый газ
- д. дамба, плотина
  - 24. Соотнесите термины с их определениями
- 1. educator
- 2. horticulturalist
- 3. agronomist
- 4.geneticist
- 5. animal scientist
- a. a person who studies genetics
- 6. a scientist who works in agronomy (= the science of farming)
- B. a person who teaches people
- г. specializes in the study of various aspects of animal biology, behavior, management, and production
- д. specializes in the science and practice of cultivating and managing plants

# 25. . Найдите соответствие между английскими и русскими терминами

- 1. to monitor
- 2. to oversee
- 3. to inspect
- 4. to employ
- 5. to manage
- а. руководить, управлять
- б. осуществлять надзор
- в. нанимать
- г. следить, контролировать
- д. осматривать, проводить инспекцию
  - 26. Соотнесите термины с их определениями
- 1. weeding
- 2. pest control
- 3. digitalization
- 4. artificial intelligence
- 5. automation
- a. the act of removing wild plants from a place where they are not wanted
- 6. the killing of animals and insects that are considered to be harmful to humans
- B. the process of changing something such as a document to a digital form or the use of digital technology to do something
- r. the use or study of computer systems or machines that have some of the qualities that the human brain has, such as ability to interpret and produce language in a way that seems human, recognize or create images, solve problems, and learn from data supplied to them
- д. the use of machines and computers that can operate without needing human control

#### 27. Установите соответствие между антонимами

- 1. indoors
- 2. efficient
- 3. rural
- 4. hand tools
- 5. arduous
- a. urban
- б. unproductive
- в. outdoors
- г. effortless
- д. sophisticated engine-powered equipment

#### 28. Установите соответствие между синонимами

- 1. sustainability
- 2. to attract
- 3. to surpass

- 4. livestock5. crop
- a. to entice
- б. harvest
- в. to exceed
- г. steadiness
- д. cattle

#### 29. Соотнесите термины с их определениями

- 1. innovation
- 2. mechanization
- 3. opportunity
- 4. technology
- 5. to sow
- a. (the study and knowledge of) the practical, especially industrial, use of scientific discoveries
- б. a new idea or method
- B. to put seeds in or on the ground so that plants will grow
- $\Gamma$ . an occasion or situation that makes it possible to do something that you want to do or have to do, or the possibility of doing something
- д. the process of introducing a machine to do something that used to be done by hand
  - 30. Укажите порядок членов предложения

Прочитайте задание и укажите порядок членов предложения

- a) agricultural
- б) are
- в) Most
- г) in
- д) engineers
- e) involed
- ж) certain
- 3) activities.
- и) core
- OTBET: Most agricultural engineers are involved in certain core activities.
  - 31. Прочитайте задание и укажите порядок членов предложения
- a) with
- б) technology
- в) integrate
- г) engineers
- д) Agricultural
- e) farming.
  - 32. Прочитайте задание и укажите порядок членов предложения

Прочитайте задание и укажите порядок членов предложения

- a) These б) а в) travel.
- г) positions
- д) involve
- e) may
- ж) amount
- 3) significant
- и) of
- 33. Прочитайте задание и укажите порядок членов предложения
- a) Agricultural
- б) engineers
- в) usually
- г) work
- д) full
- e) time,
- ж) including
- 3) occasional
- и) overtime.
- 34. Прочитайте задание и укажите порядок членов предложения Прочитайте задание и укажите порядок членов предложения
- a) Traditional
- б) agricultural
- в) mechanization
- г) characterized
- д) is
- e) the
- ж) by
- 3) use
- и) tractors
- к) of
- л) engine
- м) and
- н) power.
  - 35. Найдите соответствие между синонимами
- 1. astonishing
- 2. thriving
- 3. routinely
- 4. apparently
- 5. viable
- a. surprising
- б. flourishing
- в. as a rule
- г. obviously
- д. achievable
  - 36. Укажите верный ответ

... and hydroponics are both methods that generally use less water, soil, and space than traditional field farming methods.

37. What is the main challenge with disposable nappies?

What is the main challenge with disposable nappies?

- 38. How long does it take for the mushrooms to fully degrade the nappies? How long does it take for the mushrooms to fully degrade the nappies?
- 39. Why do deep earthquakes (below 20 km) usually NOT generate large tsunamis? Why do deep earthquakes (below 20 km) usually NOT generate large tsunamis?
- 40. How does the new earthquake monitoring system determine tsunami risk? How does the new earthquake monitoring system determine tsunami risk?
- 41. What key feature of shallow earthquakes makes them more likely to produce tsunamis? What key feature of shallow earthquakes makes them more likely to produce tsunamis?
- 42. Read the following abstract. Choose two correct options. Support your idea. Agroforestry systems, involving the cultivation of woody perennials and annual crops, are increasingly practised on degraded land, usually with perennial legumes. Conservation agriculture works well with agroforestry and several tree crop systems, and farmers in both developing and developed regions practise it in some form.
- a) Agroforestry systems are increasingly practised on degraded land, usually with perennial legumes.
- 6) Agroforestry systems are increasingly practised on degraded land, usually with annual legumes.
- B) Conservation agriculture works well with agroforestry and several tree crop systems.
  - 43. Read the following abstract. Choose one correct option. Support your idea.

Teamwork is one of the fundamental skills employers look for and it's on the graduate recruiters' high priority list. Show you can collaborate, influence and compromise.

Teamwork is all about being able to operate smoothly and efficiently within a group.

- a) Teamwork is all about being able to operate within a group.
- 6) Teamwork is all about being able to operate individually.
- B) Teamwork is all about being able to operate hardly within a group.
  - 44. Read the following abstract. Choose two correct options. Support your idea

Reading for a degree requires different reading skills to reading for pleasure. Developing understanding through reading needs to be an active process, whereby you engage with the text, question and develop your ideas in response to it. The most appropriate reading technique will vary according to the purpose of your reading.

- a) Reading for a degree requires same reading skills to reading for pleasure.
- 6) Reading for a degree requires different reading skills to reading for pleasure.
- B) The reading technique will vary according to the purpose of the reading.
  - 45. What long-term challenges does the wind industry face?

What long-term challenges does the wind industry face?

- 46. How has the recession affected electricity consumption in Europe?
- a) Permanent closure of some power plants
- b) Increased efficiency in power usage
- c) Complete shift to renewable energy sources

- d) Higher electricity prices for consumers
  - 47. Укажите верный ответ
- ... is closely related to and an integral part of other competencies and qualities, including:
- problem solving;
- innovation;
- an entrepreneurial mindset;
- being able to adapt easily to new situations;
- curiosity (also known as a questioning mindset);
- imagination and vision.
  - 48. Read the following abstract. Choose two correct options. Support your idea.

To feed the growing global population, estimates suggest we'll have to increase food production. Satisfying the demand for more food – and, most likely, more meat – presents a huge challenge for our already struggling planet. Solution is for us all to adopt a plant-based diet. Excluding meat and dairy is the single most impactful way for people to reduce their environmental impact. After all, meat is deeply ingrained in many cultures, as is dairy.

- a) To feed the growing global population, estimates suggest we'll have to increase meat production.
- 6) Excluding meat and dairy is the single most impactful way for people to reduce their environmental impact.
- B) Meat is deeply ingrained in many cultures, as is dairy.
  - 49. Answer the question

How does forward-looking companies run the business in terms of ecology?

50. Tell about electric vehicle

Tell about electric vehicle

#### 7. Оценочные материалы промежуточной аттестации

Первый семестр, Зачет

Контролируемые ИДК: УК-4.1 УК-5.1 УК-4.2 УК-5.2 УК-4.3

Вопросы/Задания:

- 1. Have you ever heard about substances that cool our planet?
- 2. Do you think that problem of climate change is over -/underestimated?
- 3. Explain the dual action of black carbon and ozone.
- 4. When does UNEP's interest in black carbon date back?
- 5. Explain why the back-carbon measures save a lot more lives than ozone control.
- 6. Tell about substances that cool our planet?
- 7. What makes green hydrogen 'green'?
- 8. How can green hydrogen be used?
- 9. Have electric vehicles had 'won' traditional transport?

- 10. What is the most common hydrogen production technique?
- 11. What are the main problems in producing, transporting and storage of green hydrogen?
- 12. Why does green hydrogen have high production cost?
- 13. What's Australia's green hydrogen experience?
- 14. What do Australia's experts predict?
- 15. Is it possible to convert green hydrogen into other substances?
- 16. What the main problem with air pollution consist in?
- 17. Explain how people try to curb air pollution.
- 18. What is mycoremediation?
- 19. How long does it take to degrade a nappy completely using a new waste technology and without it?
  - 20. Do you consider waste management to be the promising direction?
  - 21. What technologies are used in your country (region) to clean up waste?
  - 22. Where does Pleurotus live in the wild?
  - 23. What sorts of earthquakes do you know?
  - 24. Describe the main principles of a new tsunami prediction system
  - 25. What seismic zones do you know in the world and in Russia?
  - 26. Is wind energy used in your region? If not, do you consider this idea to be good?
  - 27. Does your region have favorable conditions for wind-mill installation?
  - 28. Talk about the reasons of decline in a wind-energy industry.
- 29. Why do buyers in Europe and America prefer placing orders mainly with the biggest firms?
  - 30. What do analysts predict about the future of wind-energy market?
  - 31. Are you a post graduate (a research) student?
  - 32. When did you take your post graduate course?
  - 33. Have you passed all your examinations yet?

- 34. When are you going to take your exam in English?
- 35. Who is your adviser (superviser)?
- 36. Do you work at your thesis? Have you started working at your thesis?
- 37. What part of your dissertation have you completed?
- 38. Have you got any publications on the subject you study?
- 39. When are you supposed to read (prove) your thesis?
- 40. What science degree do you expect to get?
- 41. In what field do you do (carry on) your research?
- 42. Are you a theoretician or an experimentalist?
- 43. What problems do you investigate?
- 44. Do you carry on research individually or in a team?
- 45. What is the object of your research?
- 46. What methods do you use (employ) in your work?
- 47. Перевод со словарем Text№1

#### Nature Protection

Computers project that between now and the year of 2030 we are going to have increase of the average temperature between 1,5–4,5 Degrees C. Sea levels would rise by several metres, flooding coastal areas and ruining vast tracts of farmland. Huge areas would be infertile and become uninhabitable. Water contamination could lead to shortages of safe drinking water. It looks like the end of civilization on the Earth.

For hundreds of thousands of years the human race has thriven in Earth's environment. But at the end of the 20th century, we were at a crucial turning point. We have upset nature's sensitive equilibrium releasing harmful substances into the air, polluting rivers and oceans with industrial waste and tearing up the countryside to accommodate our rubbish. These are the consequences of the development of civilization. We are to stop it by joint efforts of all the people of the world.

The range of environmental problems is wide. But the matters of people's great concern nowadays are atmosphere and climate changes, depletion of the ozone layer, freshwater resources, oceans and coastal areas, deforestation and desertification, biological diversity, biotechnology, health and chemical safety. United Nations Environment Program (UNEP) concentrates its activities on these issues.

One of the most alarming forms of air pollution is acid rain. It results from the release into the atmosphere of sulphur and nitrogen oxides that react with water droplets and return to earth in the form of acid rain, mist or snow. Acid rain is killing forests (nearly every species of tree is affected). It has acidified lakes and streams and they can't support fish, wildlife, plants or insects.

48. Перевод со словарем Text№2

Nature Protection (2)

The protective layer of the Earth, the ozone layer, which protects the Earth from the sun's destructive ultraviolet rays, is being damaged by chlorofluorocarbons. They are released by the daily use of industrial and household products: refrigerators, air conditioners, foam insulation, cleaning chemicals, food packaging. In the ozone layer they attack the ozone molecules making a "hole". This "hole" allows more UV rays to penetrate to the Earth. It increases the risk of skin cancer, weakens the immune system of people. Besides, UV rays influence the oceans, the growth of plankton, an essential part of the marine-life food chain in the negative way reduce economically important crops (rice, cotton, soy beans).

It's generally agreed that the destruction of the tropical forest has a major impact on the world climate. The tropical rain forest is a natural recycler, provider and protector for our planet. It recycles carbon, nitrogen and oxygen, helps determine temperature, rainfall and other climatic conditions and supports the most diverse ecosystem in the world. Deforestation could cause one fourth of all species on earth to vanish in the next 25 years.

We have only a few years to attempt to turn things around. We must review our wasteful, careless ways, we must consume less, recycle more, conserve wildlife and nature, act according to the dictum "think locally, think globally, act locally". To my mind, we are obliged to remove factories and plants from cities, use modern technologies, redesign and modify purifying systems for cleaning and trapping harmful substances, protect and increase the greenery and broaden ecological education. These are the main practical measures, which must be taken in order to improve the ecological situation.

#### 49. Перевод со словарем Text№3

# **Ecology**

Ecology is the study that helps to preserve the Earth, its plants and animals. It is also supposed to study the environment and the relationship between human activities and nature. Until recently this relationship was in balance. However, at present times we have to face such ecological problems as acid rain, global warming, loss of rare species, ozone reduction, etc. Many scientists think that it is connected with industrial boom and development of civilization in the world. Building numerous factories people have started to interfere intensively in nature. Every year world industry pollutes the atmosphere with tons of dust and other harmful things. As a result many species of animals and plants disappear forever, including fish and birds. Many large cities suffer from factory smog. Their activity pollutes the air, the water, the forests and the land.

Apart from factories there are lots of vehicles in the streets of every more or less developed city. It includes cars, motorbikes, buses, minivans, trucks and other types of transport which use fuel. First of all, they exhaust toxic gases into the air. Secondly, they are considered to be the main noise offenders in the city. This problem progresses as the number of cars increases from year to year. As a result the level of harmful substances in the air also increases. Another problem which is worth mentioning is the tree cutting. Trees are a source of oxygen and clean air. So, by doing this people simply violate the biological balance. All the above mentioned ecological problems are the result of man's careless interaction with nature. Ecologists claim that environmental protection should become of a global concern and serious measures should be taken to create ecological security.

#### 50. Перевод со словарем Техт№4

#### **Ecological Problems**

Since ancient times Nature has served Man, being the source of his life. For thousands of years people lived in harmony with environment and it seemed to them that natural riches were unlimited. But with the development of civilization man's interference in nature began to increase.

Large cities with thousands of smoky industrial enterprises appear all over the world today. The by-products of their activity pollute the air we breathe, the water we drink, the land we grow grain and vegetables on.

Every year world industry pollutes the atmosphere with about 1000 million tons of dust and other harmful substances. Many cities suffer from smog. Vast forests are cut and burn in fire. Their disappearance upsets the oxygen balance. As a result some rare species of animals, birds, fish and plants disappear forever, a number of rivers and lakes dry up. The pollution of air and the world's

ocean, destruction of the ozone layer is the result of man's careless interaction with nature, a sign of the ecological crises.

The most horrible ecological disaster befell Ukraine and its people after the Chernobyl tragedy in April 1986. About 18 percent of the territory of Belarus was also polluted with radioactive substances. A great damage has been done to the agriculture, forests and people's health. The consequences of this explosion at the atomic power-station are tragic for the Ukrainian, Belorussian and other nations.

Environmental protection is of a universal concern. That is why serious measures to create a system of ecological security should be taken. Some progress has been already made in this direction. As many as 159 countries – members of the UNO – have set up environmental protection agencies. Numerous conferences have been held by these agencies to discuss problems facing ecologically poor regions including the Aral Sea, the South Urals, Kuzbass, Donbass, Semipalatinsk and Chernobyl.

#### 51. Перевод со словарем Text№5

# **Ecological Disasters**

Many years ago people lived in greater harmony with nature and environment than they do now. Ecological ignorance of people leads to the destruction of nature and worsens the living conditions for all living beings.

A great number of ecological catastrophes took place in the 20th and 21st centuries and most of them are the results of men's activity. There is no need to enumerate everything that happened in order to understand the horrible consequences of these numerous disasters. It would be quite enough to have a look at some of them.

One of the largest catastrophes occurred on the 26th of April, 1986. It was the explosion of one of the energy blocks at the Chernobyl Nuclear Power Plant in Ukraine. It is considered to be the worst nuclear plant disaster in history. Due to this explosion there was highly radioactive fallout into the atmosphere which covered thousands of square kilometers of land. The most contaminated zones included Ukraine, Russia and Belarus and affected directly about 2,600,000 inhabitants. Some of them died in the first ten years, some were evacuated out of the place. After the accident in Chernobyl, soil and forest areas were polluted with radioactive elements. Besides that, the health of the population was seriously damaged which resulted in increase of infantile mortality, cancer or thyroid and in increase of the amount of children born with leukemia, malformations, tumors and other affections.

Another ecological disaster which is recognized as one of the greater causes of oceanic contamination is the petroleum spills. These spills lead to the death of aquatic birds, fish and other creatures of the oceans. As a result, the ecological balance is broken and then, fishing, navigation or usages of recreational zones become impossible.

#### 52. Перевод со словарем Text№6

#### Global Warming

Global warming is sometimes referred to as the greenhouse effect. The greenhouse effect is the absorption of energy radiated from the Earth's surface by carbon dioxide and other gases in the atmosphere, causing the atmosphere to become warmer.

Each time we burn gasoline, oil, coal, or even natural gas, more carbon dioxide is added to the atmosphere. The greenhouse effect is what is causing the temperature on the Earth to rise, and creating many problems that will begin to take place in the coming decades.

Today, however, major changes are taking place. People are conducting an unplanned global experiment by changing the face of the entire planet. We are destroying the ozone layer, which allows life to exist on the Earth's surface.

All of these activities are unfavorably changing the composition of the biosphere and the Earth's heat balance. If we do not slow down our use of fossil fuels and stop destroying the forests, the world could become hotter than it has been in the past million years.

Average global temperatures have risen 1 degree over the last century. If carbon dioxide and other greenhouse gases continue to spill into the atmosphere, global temperatures could rise five to 10

degrees by the middle of the next century. Some areas, particularly in the Northern Hemisphere, will dry out and a greater occurrence of forest fires will take place.

At the present rate of destruction, most of the rain forests will be gone by the middle of the century. This will allow man-made deserts to invade on once lush areas. Evaporation rates will also increase and water circulation patterns will change.

Decreased rainfall in some areas will result in increased rainfall in others. In some regions, river flow will be reduced or stopped all together completely. Other areas will experience sudden downpours that create massive floods.

### 53. Перевод со словарем Техт№7

#### Water Pollution

Water pollution occurs mostly, when people overload the water environment such as streams, lakes, underground water, bays or seas with wastes or substances harmful to living beings.

Water is necessary for life. All organisms contain it, some drink it and some live in it. Plants and animals require water that is moderately pure, and they cannot survive, if water contains toxic chemicals or harmful microorganisms. Water pollution kills large quantity of fish, birds, and other animals, in some cases killing everything in an affected area.

Pollution makes streams, lakes, and coastal waters unpleasant to swim in or to have a rest. Fish and shellfish harvested from polluted waters may be unsafe to eat. People who polluted water can become ill, if they drink polluted water for a long time, it may develop cancer or hurt their future children. The major water pollutants are chemical, biological, and physical materials that lessen the water quality. Pollutants can be separated into several different classes:

The first class is petroleum products: oil, fuel, lubrication, plastics. The petroleum products get into water by accidental spills from ships, tanker trucks and when there are leaks from underground storage tanks. Many petroleum products are poisonous for animals. Spilled oil damages the feathers of birds and the fur of animals, often it causes death.

The second class is pesticides and herbicides. There are chemicals used to kill harmful animals and plants. If they penetrate into streams, rivers, lakes, these chemicals can be very dangerous. The chemicals can remain dangerous for a long time. When an animal eats a plant that's been treated with it, the poisons are absorbed into the tissues and organs of the animals.

#### 54. Перевод со словарем Text№8

#### Environmental Movement in Russia

The Russian environmental movement presents several puzzles to scholars interested in the development of civil society in post-soviet Russia. Although environmental issues mobilized thousands of citizens during the perestroika era and environmental conditions in Russia remain dire, environmental protest has declined. In spite of the decline in protest events, however, the number of Russian environmental organizations increased steadily during the 1990s. The overall number of environmental organizations, their geographical dispersal throughout Russia, and their increasing professionalism all seem to signify the development of a vibrant sector within civil society. The mere creation of NGOs is not a measure of civil society development, however. This paper adopts two strategies for assessing Russian environmentalists' contribution to civil society. First, informed by Western theories of civil society development, the paper asks whether Russian environmental organizations are able to act as intermediaries between state and society. Then, in an effort to pinpoint unique features of the country's social transformation, the paper uses interview data from 84 green organizations located in five Russian regions to explore the goals and activities of environmentalists and to ask how green activists relate to state and societal actors.

A close examination of the Russian environmental movement reveals that green organizations have a mixed record of effectiveness in acting as intermediaries. They have struggled to present policy alternatives and monitor the government while largely failing to mobilize the population and encountering hostility from government officials. Yet a narrow assessment of environmental organizations' relative strength or weakness along these criteria overlooks an increasingly diverse sector of green activism.

# 55. Перевод со словарем Техт№9

Sewerage

Man's sewerage practice has been known from ancient times. Explorations revealed sewers in Babylon dating from the 7-th century before our era. Remains of sanitary sewers are to be found in the ruins of the prehistoric cities of Crete and the ancient cities of Assyria. Rome also had sewers, but they were primarily drains to carry away storm water.

Sewerage was practically unknown during the middle ages, and not until modern times the construction of sewers was resumed. At first, however, they were storm sewers not designed to carry domestic sewage.

The water courses in or near towns apparently were used as convenient places of refuse disposal. The offensive and dangerous materials were discharged into streams where they decomposed to cause discomfort and danger to rural populations or to cities located down streams. Most cities, therefore, soon found it necessary to treat the sewage before releasing it.

The history of the progress of sanitation in London probably shows a typical picture of what took place quite generally about the middle of 19-th century in the largest cities of Great Britain and the United States. Sanitation was little considered and execution of sewage work was impossible. There were hundreds of streets in London that had no sewers. All through London's history until modern time, the question of water supply continued to be a problem. In the 18-th century even with the appearance of larger water companies the water supply was far from being satisfactory. Water taken from the river Thames was offensive to the sight as the intake was only three yards from the outlet of a great sewer. But the feeling that public health depends largely upon sewerage was the deciding factor in the growing recognition of good sewerage system.

56. Перевод со словарем Text№10

Industrial Water Use

It is estimated that 22 % of worldwide water is used in industry. Major industrial users include hydroelectric dams, thermoelectric power plants, which use water for cooling, ore and oil refineries, which use water in chemical processes, and manufacturing plants, which use water as a solvent. Water withdrawal can be very high for certain industries, but consumption is generally much lower than that of agriculture.

Water is used in renewable power generation. Hydroelectric power derives energy from the force of water flowing downhill, driving a turbine connected to a generator. This hydroelectricity is a low-cost, non-polluting, renewable energy source. Significantly, hydroelectric power can also be used for load following unlike most renewable energy sources which are intermittent. Ultimately, the energy in a hydroelectric power plant is supplied by the sun. Heat from the sun evaporates water, which condenses as rain in higher altitudes and flows downhill. Pumped-storage hydroelectric plants also exist, which use grid electricity to pump water uphill when demand is low, and use the stored water to produce electricity when demand is high.

Hydroelectric power plants generally require the creation of a large artificial lake. Evaporation from this lake is higher than evaporation from a river due to the larger surface area exposed to the elements, resulting in much higher water consumption. The process of driving water through the turbine and tunnels or pipes also briefly removes this water from the natural environment, creating water withdrawal. The impact of this withdrawal on wildlife varies greatly depending on the design of the power plant.

Pressurized water is used in water blasting and water jet cutters. Also, very high pressure water guns are used for precise cutting. It works very well, is relatively safe, and is not harmful to the environment.

Перевод со словарем Техt№11

Waste Water

A few statistics illustrate the scale of the problem that waste water (chemicals washed down drains and discharged from factories) can cause. Around half of all ocean pollution is caused by sewage and waste water. Each year, the world generates perhaps 5–10 billion tons of industrial waste, much of

which is pumped untreated into rivers, oceans, and other waterways. In the United States alone, around 400,000 factories take clean water from rivers, and many pump polluted waters back in their place. However, there have been major improvements in waste water treatment recently. Since 1970, in the United States, the Environmental Protection Agency (EPA) has invested about \$70 billion in improving water treatment plants that, as of 2015, serve around 88 percent of the US population (compared to just 69 percent in 1972). However, another \$271 billion is still needed to update and upgrade the system.

Factories are point sources of water pollution, but quite a lot of water is polluted by ordinary people from nonpoint sources; this is how ordinary water becomes waste water in the first place. Virtually everyone pours chemicals of one sort or another down their drains or toilets. Even detergents used in washing machines and dishwashers eventually end up in our rivers and oceans. So do the pesticides we use on our gardens. A lot of toxic pollution also enters waste water from highway runoff. Highways are typically covered with a cocktail of toxic chemicals – everything from spilled fuel and brake fluids to bits of worn tires (themselves made from chemical additives) and exhaust emissions. When it rains, these chemicals wash into drains and rivers. It is not unusual for heavy summer rainstorms to wash toxic chemicals into rivers in such concentrations that they kill large numbers of fish overnight.

#### 58. Перевод со словарем Техт№12

Water Pollution

Water pollution occurs mostly when people overload the water environment with wastes. It's defined as contamination of streams, lakes, underground water, bays or oceans by substances harmful to living things.

Water is necessary to life on earth. All organisms contain it, some drink it and some live in it. Plants and animals require water that is moderately pure, and they cannot survive if their water is loaded with toxic chemicals or harmful microorganisms. If severe, water pollution can kill large numbers of fish, birds and other animals, in some cases killing all members of a species in an affected area.

Pollution makes streams, lakes and coastal waters unpleasant to look at, to smell and to swim in. Fish and shellfish harvested from polluted waters may be unsafe to eat. People who ingest polluted water can become ill and, if they're exposed for a long time, may develop cancers or have children with birth defects.

There are two types of water pollution: point source and nonpoint source. Point sources of pollution occur when harmful substances are put directly into a body of water (such as an oil spill). A nonpoint source is when pollutants enter the water indirectly through environmental changes (like when fertilizer is carried into a stream by rain).

The major water pollutants are chemical, biological and physical materials that lessen the water quality.

Pollutants can be separated into eight different classes:

- 1. Petroleum Products oil and chemicals from oil are used for fuel, lubrication, plastics manufacturing and many other purposes. The petroleum products get into water by accidental spills from ships, tanker trucks and leaky underground storage tanks. Many petroleum products are poisonous if ingested by animals and spilled oil damages the feathers of birds and the fur of animals, often causing death.
  - 59. Перевод со словарем Техт№13

Water Pollution(2)

2. Pesticides and Herbicides – chemicals used to kill unwanted animals and plants may be carried into streams by rainwater. The chemicals in these that are not biodegradable can remain dangerous for a long time.

When an animal eats a plant that's been treated with certain non-degradable chemicals, the chemicals are absorbed into the tissues or the organs of the animals. When other animals feed on a contaminated animal, the chemicals are passed up to them. As it goes up through the food chain, the chemical becomes more harmful, so animals at the top of the food chains may suffer cancers, reproductive problems and death.

Nitrates can cause a lethal form of anemia called blue baby syndrome in infants.

- 3. Heavy Metals heavy metals, such as copper, lead, mercury and selenium get into the water from industries, automobile exhausts, mines and natural soil. Heavy metals also become more harmful as they follow the food chain. When they reach high levels in the body, they can be immediately poisonous or can result in long-term health problems. They can sometimes cause diarrhea and, over time, liver and kidney damage. Children exposed to lead in water can suffer mental retardation.
- 4. Hazardous Wastes chemical wastes that are toxic, reactive, corrosive or ignitable. If not treated or stored properly, they can pollute water supplies. They can reach toxic levels when animals eat one another.
- 5. Excess Organic Matter fertilizers and other nutrients used to promote plant growth on farms and in gardens may find their way into water. At first the nutrients will help the plants and algae in the water grow, but when they die and settle underwater, microorganisms decompose them, while decomposing them the microorganisms take in oxygen that is dissolved in the water. The oxygen levels in the water may drop so low that fish and other oxygen-dependent animals in the water suffocate and die.
  - 60. Перевод со словарем Text№14

How can We Stop Water Pollution?

There is no easy way to solve water pollution; if there were, it wouldn't be so much of a problem. Broadly speaking, there are three different things that can help to tackle the problem – education, laws, and economics – and they work together as a team.

Education

Making people aware of the problem is the first step to solving it. In the early 1990s, when surfers in Britain grew tired of catching illnesses from water polluted with sewage, they formed a group called Surfers against Sewage to force governments and water companies to clean up their act. People who've grown tired of walking the world's polluted beaches often band together to organize community beach-cleaning sessions. Anglers who no longer catch so many fish have campaigned for tougher penalties against factories that pour pollution into our rivers. Greater public awareness can make a positive difference.

Laws

One of the biggest problems with water pollution is its transboundary nature. Many rivers cross countries, while seas span whole continents. Pollution discharged by factories in one country with poor environmental standards can cause problems in neighboring nations, even when they have tougher laws and higher standards. Environmental laws can make it tougher for people to pollute, but to be really effective they have to operate across national and international borders. This is why we have international laws governing the oceans, such as:

- the 1982 UN Convention on the Law of the Sea signed by over 120 nations),
- the 1972 London Dumping Convention,
- the 1978 MARPOL International Convention for the Prevention of Pollution from Ships,
- the 1998 OSPAR Convention for the Protection of the Marine Environment of the North East Atlantic.
  - 61. Перевод со словарем Text№15

How can We Stop Water Pollution?(2)

Most environmental experts agree that the best way to tackle pollution is through something called the polluter pays principle. This means that whoever causes pollution should have to pay to clean it up, one way or another. Polluter pays can operate in all kinds of ways. It could mean that tanker owners should have to take out insurance that covers the cost of oil spill cleanups, for example. It could also mean that shoppers should have to pay for their plastic grocery bags, as is now common in Ireland, to encourage recycling and minimize waste. Ultimately, the polluter pays principle is designed to deter people from polluting.

Life is ultimately about choices – and so is pollution. We can live with sewage-strewn beaches, dead rivers, and fish that are too poisonous to eat. Or we can work together to keep the environment clean so the plants, animals, and people who depend on it remain healthy. We can take individual action to

help reduce water pollution, for example, by using environmentally friendly detergents, not pouring oil down drains, reducing pesticides, and so on. We can take community action too, by helping out on beach cleans or litter picks to keep our rivers and seas that little bit cleaner.

To help, we need to learn about ways for disposing harmful household wastes so they don't end up in sewage treatment plants or landfills. In our yards, we should determine whether or not we need to add nutrients before fertilizers are applied and look for alternatives where fertilizers may run off into surface waters. We need to preserve existing trees and plant new trees and shrubs to help prevent soil erosion. Around the house we should keep litter, pet waste, leaves and grass clippings out of gutters and storm drains, and buy as many heavily packaged foods, certain boxes, cartons, bottles, etc. that are made without polluting dyes. And we can take action as countries and continents to pass laws that will make pollution harder and the world less polluted.

# 62. Перевод без словаря Техт№1

# Animals Need Help

People have lived on our planet for many years. They lived and live on different continents, in different countries. People depend on their planet, on the sun, on animals and plants around them.

Our ecology becomes worse and worse with every new day. Many species of animals and birds are disappearing nowadays. People destroy wildlife, cut down trees to make furniture. They forget that people can't live without trees and plants, because they fill air with oxygen. And, of course, great problems are population and animal destruction.

A large number of animals are disappearing every day. People kill animals for different aims: e.g. people hunt whales for their meat and oil, elephants for their tusks, crocodiles for their leather and so on. And also animals are used for medical experiments. Modern life is bad for animals, birds, fish. The air isn't fresh and the water isn't pure. They don't have good meal and facilities for the life. You can find their names in the Red Book.

Of course, people can't stay indifferent to these problems. There are a lot of special organizations, which try to save animals.

# 63. Перевод без словаря Техт№2

#### **Ecology**

In recent years the environmental problems have become extremely urgent and received a great publicity. In some way they are the result of scientific and technological progress of the 20-th century. But people also do a lot of harm to nature because they don't understand that the man is the part of the environment. The relationship between man and nature has become one of the most vital problems facing civilization today.

Pollution of water and air is one of the problems millions of people are concerned about today. Acid rains, radioactive and other poisonous materials, disposal of wastes became the global disasters. Cars are one of the most harmful and dangerous polluters of air.

In more than a hundred towns and cities the concentration of harmful substances in the air and water is over 10 times the admissible level. One of them is Archangelsk. It is one of the most "dirty" towns of the country. The Northern Dvina, its main water source, is fully polluted with industrial wastes the result of side-effect in the work of three giant pulp and paper mills. Water is not suitable for drinking.

#### 64. Перевод без словаря Техт№3

#### **Environmental Problems**

The word "environment" means simply what is around us. Some people live in a town environment; for others, their environment is the countryside.

Nowadays people understand how important it is to solve the environment problems that endanger people's lives. The most serious environmental problems are: pollution in its many forms (water pollution, air pollution, soil pollution, etc.), noise from cars, buses, planes, etc., destruction of wildlife and countryside beauty, shortage of natural resources (metals, different kinds of fuel), the growth of population, climate change and many others.

There is no ocean or sea, which is not used as a dump. Many seas are used for dumping industrial

and nuclear waste. This poisons and kills fish and aquatic animals.

Many rivers and lakes are poisoned too. Fish and reptiles can't live in them. There is not enough oxygen in the water. In such places all the birds leave their habitats and many plants die. If people drink this water they can die too. It happens so because factories produce a lot of waste and pour it into rivers poisoning water.

65. Перевод без словаря Техт№4

Problems of the Environment

Nowadays people understand how important it is to solve the environment problems that endanger people's lives. The most serious environmental problems are: pollution in its many forms (water pollution, air pollution, nuclear pollution), noise from cars, buses, planes, etc., destruction of wildlife and countryside beauty, shortage of natural resources (metals, different kinds of fuel), the growth of population.

Most of the pollution in big cities comes from cars and buses. More and more often people are told not to be in direct sunlight, because ultraviolet radiation from the sun can cause skin cancer. Normally the ozone layer in the atmosphere protects us from such radiation, but if there are holes in the ozone layer ultraviolet radiation can get to the earth. Many scientists think that these holes are the result of air pollution.

Both clean air and clean water are necessary for our health. If people want to survive they must solve these problems quickly. Man is beginning to understand that his environment is not just his own town or country, but the whole earth.

66. Перевод без словаря Техт№5

**Global Warming** 

"Global warming" has been introduced by the scientific community and the media as the term that includes all potential changes in climate which result from higher average global temperatures. Hundreds of scientists from many different countries are working to understand global warming and have come to a consensus on several important aspects. In general, global warming will produce far more profound climatic changes than simply a rise in global temperature.

An analysis of temperature records shows that the Earth has warmed an average of 0.5°C over the past 100 years. This is consistent with predictions of global warming due to an enhanced greenhouse effect and increased aerosols.

As the Earth's climate is the result of extremely complex interactions, scientists still cannot predict the exact impact of heat-trapping gases on the earth's climate over the next century. The current estimate is that if carbon dioxide concentrations double over preindustrial levels, an atmospheric doubling of carbon dioxide could occur as early as 2050.

67. Перевод без словаря Text№6

Climate Change

The Earth's climate is the result of extremely complex interactions among the atmosphere, the oceans, the land masses, and living organisms, which are all warmed daily by the sun's energy. This heat would radiate back into space if not for the atmosphere, which relies on a delicate balance of heat-trapping gases - including water vapor, carbon dioxide, nitrous oxide, and methane - to act as a natural "greenhouse," keeping in just the right amount of the sun's energy to support life.

For the past 150 years, though, the atmospheric concentrations of these gases, particularly carbon dioxide, have been rising. As a result, more heat is being trapped than previously, which in turn is causing the global temperature to rise. Climate scientists have linked the increased levels of heat-trapping gases in the atmosphere to human activities, in particular the burning of fossil fuels (coal, oil, and natural gas for heating and electricity; gasoline for transportation), deforestation, and cattle ranching.

As the Earth's climate is the result of extremely complex interactions, scientists still cannot predict the exact impact of heat-trapping gases on the earth's climate.

68. Перевод без словаря Text№7

Nature and Ecology

Since ancient times Nature has served man, being the source of his life. For thousands of years people lived in harmony with environment and it seemed to them that natural riches were unlimited. But with the development of civilization man's interference in nature began to increase.

Every year world industry pollutes the atmosphere with about 1,000 million tons of dust and other harmful substances. Many cities suffer from smog. Vast forests are cut and burn in fire. Their disappearance upsets the oxygen balance. As a result some rare species of animals, birds, fish and plants disappear forever, a number of rivers and lakes dry up.

The pollution of the air and the world's ocean, destruction of the ozone layer is the result of man's careless interaction with nature. Environmental protection is of a universal concern. That is why serious measures to create a system of ecological security should be taken.

Of course, people are working to make the earth cleaner. There are some laws and decisions on this important question. There are state organizations and international conventions which pay much attention to this problem.

69. Перевод без словаря Text№8

Protection of the Environment

For hundreds of thousands of years the human race has thriven in Earth's environment. But at the end of the 20th century, we were at a crucial turning point. We have upset nature's sensitive equilibrium releasing harmful substances into the air, polluting rivers and oceans with industrial waste and tearing up the countryside to accommodate our rubbish. These are the consequences of the development of civilization.

The range of environmental problems is wide. But people's great concern nowadays is about atmosphere and climate changes, depletion of the ozone layer, freshwater resources, deforestation, health and chemical safety. United Nations Environment Programme (UNEP) concentrates its activities on these issues.

We have only a few years to attempt to turn things around. We must review our wasteful, careless ways, we must consume less, recycle more, conserve wildlife and nature. We are obliged to use modern technologies, modify purifying systems, protect wildlife. These are the main practical measures, which must be taken in order to improve the ecological situation.

70. Перевод без словаря Техт№9

Air Pollution

There are a lot of ecological problems. The most serious ecological problems are: noise from cars and buses; destruction of wildlife and countryside beauty; shortage of natural resources; the growth of population; pollution in its many forms.

Air pollution is one of the most urgent problems. Air pollution affects the health of people. For example: ultraviolet radiation from the sun can cause skin cancer. Normally the ozone layer in the atmosphere protects us from such radiation, but if there are holes in the ozone layer ultraviolet radiation can get to the earth. Many scientists think that these holes are the result of air pollution.

One of the most alarming forms of air pollution is acid rain. It results from the release into the atmosphere of sulphur and nitrogen oxides that react with water droplets and return to earth in the form of acid rain, mist or snow. Acid rain is killing forests (nearly every species of tree is affected). It has acidified lakes and streams and they can't support fish, wildlife, plants or insects.

To make air clear clean again we need good filters at nuclear power stations, at factories, in cars and buses.

71. Перевод без словаря Text№10

Animals in Danger

In New York zoo at the end of an exposition behind the crates of lions and tigers a stone low-built building is located. The strong thick lattice reserves glass showcase. The inscription above it says: "The most dangerous animal in the world!" And when the intrigued visitor approaches his face to the lattice, he sees... himself: a back wall of a crate is a mirror!

Certainly, it is a joke, but a bitter joke, and it contains the deep sense and reproach.

Fauna of the Earth has begun to fall into decline, the processes of evolution have been broken.

The influence of man on wild animals appears in two ways: direct influence (destruction or, on the contrary, protection) and indirect influence through changes of their habitat conditions.

The man on the Earth creates a new landscape. It is an irreversible and natural process. But some changes of the landscape are rough and obvious. They are: ploughing up of steppes, cutting down of woods, irrigation and other modifications of an earth surface. As a result the whole species of animals begin to disappear because they have no place to live.

#### 72. Перевод без словаря Техт№11

Man and Wildlife

The influence of the man on wild animals appears in two ways: direct influence (destruction or, on the contrary, protection) and indirect influence through changes of their habitat conditions.

Direct influence of the man is a terrible scourge for the animals. The pioneers of the largest modifications of the earth surface become the main killers of the animals. The poachers armed with long-range guns, high-speed motorboats, searchlights and automobiles destroy hundreds of thousands of birds and animals. Careless business managers pollute seas, lakes and rivers by petroleum or by sewage. Laws declaring outside of the law any predatory bird, regulating even the prize for their murder cause irreparable damage. For struggle with insects-wreckers one has begun to apply various poison chemicals, which can accumulate in organisms of animals in fatal dozes. Sometimes this causes mass destruction. Such human activities lead to the destruction of animals and impoverish biological diversity.

We must save wild animals. We must take care of nature, because we are part of it.

#### 73. Перевод без словаря Text№12

The Destruction of the Ozone Layer

The Earth is our home but much of it is polluted and dying. Rapid industrial development caused a lot of ecological problems. They are: air pollution, water pollution, population growth, shortage of mineral resources, wildlife extinction, and others.

The range of environmental problems is wide. One of them is the depletion of the ozone layer.

The ozone layer, which protects the Earth from the sun's destructive ultraviolet rays, is being damaged by chlorofluorocarbons. They are released by the daily use of industrial and household products: refrigerators, air conditioners, foam insulation, cleaning chemicals, food packaging. In the ozone layer they attack the ozone molecules making a "hole". This "hole" allows more UV rays to penetrate to the Earth. It increases the risk of skin cancer, weakens the immune system of people. Besides, UV rays influence the oceans, the growth of plankton, an essential part of the marine-life food chain in the negative way, reduce economically important-crops (rice, cotton, soy beans). The life cycle is going to be undermined by the ozone.

Many scientists think that these holes are the result of air pollution.

#### 74. Перевод без словаря Техт№13

Water Pollution

Seventy percent of the Earth is covered by oceans. Oceans are vital for the life on Earth. They provide homes for millions of plants and animals, provide people with food and help regulate the climate. But now they are a big dumping ground for tons of toxic waste. Most big cities pour their waste into seas and rivers.

For a long time people did not realize the danger. The first alarm came from Japan: sixty people died because they have eaten polluted fish. The Baltic Sea is a special case. Because it is such a small sea, it becomes dirty very easily. 250 rivers run into the Baltic. There are hundreds of factories on these rivers and millions of people live along them. Seven industrial countries surround the Baltic. Once we have polluted the sea, it is very difficult to clean it.

Fortunately all the countries realized the problems and co-operated to solve ecological problems. Russia is co-operating in the field of environmental protection with the USA, Canada, Norway, Finland and other countries. A lot of public organizations have been established. One of them is

Green Peace which was formed in 1971 with its Head-quarters in Amsterdam.

75. Перевод без словаря Text№14

**Ecological Problems** 

In recent years the environmental problems have become extremely urgent and received a great publicity. In some way they are the result of scientific and technological progress of the 20-th century. But people also do a lot of harm to nature because they don't understand that man is the part of the environment. The relationship between man and nature has become one of the most vital problems facing civilization today. Pollution of water and air is one of the problems millions of people are concerned about today. Acid rains, radioactive and other poisonous materials, disposal of wastes became the global disasters. Cars are one of the most harmful and dangerous polluters of air. In more than a hundred towns and cities the concentration of harmful substances in the air and water is over 10 times the admissible level.

The ozone layer doesn't protect us from dangerous ultraviolet rays any more. They get through the atmosphere causing skin cancer and other diseases. All these facts make us become more sensitive towards the environment. The solution of the problem requires the cooperation the people's efforts in nature conservation.

76. Перевод без словаря Text№15

The Problems of Ecology

Our ecology becomes worse and worse with every new day. People destruct wildlife, cut down trees to make furniture forgetting that they can't leave without animals and plants, because they are parts of the whole. The seas are in danger too. They are filled with poison: industrial and nuclear waste. The Mediterranean is already nearly died: the North Sea is the next. If nothing is done about it one day nothing will be able to live in seas. Every ten minutes one kind of animal or plant dies out forever.

Of course, people can't stay indifferent to these problems. There are a lot of special organizations, which try to save our nature. One of them is Greenpeace. Greenpeace began its work 20 years ago from saving whales. And now Greenpeace is a world-famous organization, which saves plants, animals and people. This organization wants to rescue animals, to help them to survive and to save jungle rain forests, which are in danger of destruction. And they also help animals because many of them have already disappeared as their habitats have destroyed.

Environmental organizations try to find the right way to save land, people and animals.

#### 8. Материально-техническое и учебно-методическое обеспечение дисциплины

#### 8.1. Перечень основной и дополнительной учебной литературы

Основная литература

- 1. СТЕПАНОВА А. П. Профессиональный иностранный язык (английский): метод. указания / СТЕПАНОВА А. П., Криворучко И. С.. Краснодар: КубГАУ, 2022. 20 с. Текст: электронный. // : [сайт]. URL: https://edu.kubsau.ru/mod/resource/view.php?id=11327 (дата обращения: 08.09.2025). Режим доступа: по подписке
- 2. КРИВОРУЧКО И. С. Иностранный язык (английский): метод. указания / КРИВОРУЧКО И. С.. Краснодар: КубГАУ, 2020. 40 с. Текст: электронный. // : [сайт]. URL: https://edu.kubsau.ru/mod/resource/view.php?id=7913 (дата обращения: 08.09.2025). Режим доступа: по подписке

Дополнительная литература

1. Лефтерова О. И. English for Environmental Engineers (Английский для инженеров-экологов): в 2 ч. Ч.1 / Лефтерова О. И., Рябкова Г. В.. - Казань: КНИТУ, 2016. - 120 с. - 978-5-7882-1935-6. - Текст: электронный. // RuSpLAN: [сайт]. - URL: https://e.lanbook.com/img/cover/book/102151.jpg (дата обращения: 19.06.2025). - Режим доступа: по подписке

# 8.2. Профессиональные базы данных и ресурсы «Интернет», к которым обеспечивается доступ обучающихся

*Профессиональные базы данных* Не используются.

Ресурсы «Интернет»

- 1. https://www.multitran.ru/ Словарь «Мультитран»
- 2. http://www.lingvo-online.ru/ru ABBYY Lingvo Live
- 3. https://yandex.ru/ Поисковая система «Яндекс»
- 4. https://www.google.ru/ Поисковая система «Google»

# 8.3. Программное обеспечение и информационно-справочные системы, используемые при осуществлении образовательного процесса по дисциплине

Информационные технологии, используемые при осуществлении образовательного процесса по дисциплине позволяют:

- обеспечить взаимодействие между участниками образовательного процесса, в том числе синхронное и (или) асинхронное взаимодействие посредством сети «Интернет»;
- фиксировать ход образовательного процесса, результатов промежуточной аттестации по дисциплине и результатов освоения образовательной программы;
- организовать процесс образования путем визуализации изучаемой информации посредством использования презентаций, учебных фильмов;
- контролировать результаты обучения на основе компьютерного тестирования.

Перечень лицензионного программного обеспечения:

- 1 Microsoft Windows операционная система.
- 2 Microsoft Office (включает Word, Excel, Power Point) пакет офисных приложений.

Перечень профессиональных баз данных и информационных справочных систем:

- 1 Гарант правовая, https://www.garant.ru/
- 2 Консультант правовая, https://www.consultant.ru/
- 3 Научная электронная библиотека eLibrary универсальная, https://elibrary.ru/

Доступ к сети Интернет, доступ в электронную информационно-образовательную среду университета.

Перечень программного обеспечения (обновление производится по мере появления новых версий программы) Не используется.

Перечень информационно-справочных систем (обновление выполняется еженедельно) Не используется.

#### 8.4. Специальные помещения, лаборатории и лабораторное оборудование

Университет располагает на праве собственности или ином законном основании материально-техническим обеспечением образовательной деятельности (помещениями и оборудованием) для реализации программы бакалавриата, специлитета, магистратуры по Блоку 1 "Дисциплины (модули)" и Блоку 3 "Государственная итоговая аттестация" в соответствии с учебным планом.

Каждый обучающийся в течение всего периода обучения обеспечен индивидуальным электронной информационно-образовательной неограниченным доступом К университета ИЗ любой точки, В которой имеется доступ информационно-телекоммуникационной сети "Интернет", как на территории университета, так и вне его. Условия для функционирования электронной информационно-образовательной среды могут быть созданы с использованием ресурсов иных организаций.

Лекционный зал 221гл

Облучатель-рециркулятор воздуха 600 - 1 шт.

### 9. Методические указания по освоению дисциплины (модуля)

Учебная работа по направлению подготовки осуществляется в форме контактной работы с преподавателем, самостоятельной работы обучающегося, текущей и промежуточной аттестаций, иных формах, предлагаемых университетом. Учебный материал дисциплины структурирован и его изучение производится в тематической последовательности. Содержание методических указаний должно соответствовать требованиям Федерального государственного образовательного стандарта и учебных программ по дисциплине. Самостоятельная работа студентов может быть выполнена с помощью материалов, размещенных на портале поддержки Moodl.

# Методические указания по формам работы

#### Лабораторные занятия

Практическое освоение студентами научно-теоретических положений изучаемого предмета, овладение ими техникой экспериментирования в соответствующей отрасли науки. Лабораторные занятия проводятся с использованием методических указаний, размещенных на образовательном портале университета.

# Описание возможностей изучения дисциплины лицами с ОВЗ и инвалидами

Для инвалидов и лиц с OB3 может изменяться объём дисциплины (модуля) в часах, выделенных на контактную работу обучающегося с преподавателем (по видам учебных занятий) и на самостоятельную работу обучающегося (при этом не увеличивается количество зачётных единиц, выделенных на освоение дисциплины).

Фонды оценочных средств адаптируются к ограничениям здоровья и восприятия информации обучающимися.

Основные формы представления оценочных средств — в печатной форме или в форме электронного документа.

Формы контроля и оценки результатов обучения инвалидов и лиц с OB3 с нарушением зрения:

- устная проверка: дискуссии, тренинги, круглые столы, собеседования, устные коллоквиумы и др.;
- с использованием компьютера и специального ПО: работа с электронными образовательными ресурсами, тестирование, рефераты, курсовые проекты, дистанционные формы, если позволяет острота зрения - графические работы и др.;
- при возможности письменная проверка с использованием рельефно-точечной системы Брайля, увеличенного шрифта, использование специальных технических средств

(тифлотехнических средств): контрольные, графические работы, тестирование, домашние задания, эссе, отчеты и др.

Формы контроля и оценки результатов обучения инвалидов и лиц с ОВЗ с нарушением слуха:

- письменная проверка: контрольные, графические работы, тестирование, домашние задания, эссе, письменные коллоквиумы, отчеты и др.;
- с использованием компьютера: работа с электронными образовательными ресурсами, тестирование, рефераты, курсовые проекты, графические работы, дистанционные формы и др.;
- при возможности устная проверка с использованием специальных технических средств (аудиосредств, средств коммуникации, звукоусиливающей аппаратуры и др.): дискуссии, тренинги, круглые столы, собеседования, устные коллоквиумы и др.

Формы контроля и оценки результатов обучения инвалидов и лиц с ОВЗ с нарушением опорно-двигательного аппарата:

- письменная проверка с использованием специальных технических средств (альтернативных средств ввода, управления компьютером и др.): контрольные, графические работы, тестирование, домашние задания, эссе, письменные коллоквиумы, отчеты и др.;
- устная проверка, с использованием специальных технических средств (средств коммуникаций): дискуссии, тренинги, круглые столы, собеседования, устные коллоквиумы и др.;
- с использованием компьютера и специального ПО (альтернативных средств ввода и управления компьютером и др.): работа с электронными образовательными ресурсами, тестирование, рефераты, курсовые проекты, графические работы, дистанционные формы предпочтительнее обучающимся, ограниченным в передвижении и др.

Адаптация процедуры проведения промежуточной аттестации для инвалидов и лиц с ОВЗ.

В ходе проведения промежуточной аттестации предусмотрено:

- предъявление обучающимся печатных и (или) электронных материалов в формах, адаптированных к ограничениям их здоровья;
- возможность пользоваться индивидуальными устройствами и средствами, позволяющими адаптировать материалы, осуществлять приём и передачу информации с учетом их индивидуальных особенностей;
- увеличение продолжительности проведения аттестации;
- возможность присутствия ассистента и оказания им необходимой помощи (занять рабочее место, передвигаться, прочитать и оформить задание, общаться с преподавателем).

Формы промежуточной аттестации для инвалидов и лиц с OB3 должны учитывать индивидуальные и психофизические особенности обучающегося/обучающихся по АОПОП ВО (устно, письменно на бумаге, письменно на компьютере, в форме тестирования и т.п.).

Специальные условия, обеспечиваемые в процессе преподавания дисциплины студентам с нарушениями зрения:

- предоставление образовательного контента в текстовом электронном формате, позволяющем переводить плоскопечатную информацию в аудиальную или тактильную форму;
- возможность использовать индивидуальные устройства и средства, позволяющие адаптировать материалы, осуществлять приём и передачу информации с учетом индивидуальных особенностей и состояния здоровья студента;
- предоставление возможности предкурсового ознакомления с содержанием учебной дисциплины и материалом по курсу за счёт размещения информации на корпоративном образовательном портале;
- использование чёткого и увеличенного по размеру шрифта и графических объектов в мультимедийных презентациях;
- использование инструментов «лупа», «прожектор» при работе с интерактивной доской;
- озвучивание визуальной информации, представленной обучающимся в ходе занятий;
- обеспечение раздаточным материалом, дублирующим информацию, выводимую на экран;
- наличие подписей и описания у всех используемых в процессе обучения рисунков и иных графических объектов, что даёт возможность перевести письменный текст в аудиальный;
- обеспечение особого речевого режима преподавания: лекции читаются громко, разборчиво, отчётливо, с паузами между смысловыми блоками информации, обеспечивается

интонирование, повторение, акцентирование, профилактика рассеивания внимания;

- минимизация внешнего шума и обеспечение спокойной аудиальной обстановки;
- возможность вести запись учебной информации студентами в удобной для них форме (аудиально, аудиовизуально, на ноутбуке, в виде пометок в заранее подготовленном тексте);
- увеличение доли методов социальной стимуляции (обращение внимания, апелляция к ограничениям по времени, контактные виды работ, групповые задания и др.) на практических и лабораторных занятиях;
- минимизирование заданий, требующих активного использования зрительной памяти и зрительного внимания;
- применение поэтапной системы контроля, более частый контроль выполнения заданий для самостоятельной работы.

Специальные условия, обеспечиваемые в процессе преподавания дисциплины студентам с нарушениями опорно-двигательного аппарата (маломобильные студенты, студенты, имеющие трудности передвижения и патологию верхних конечностей):

- возможность использовать специальное программное обеспечение и специальное оборудование и позволяющее компенсировать двигательное нарушение (коляски, ходунки, трости и др.);
- предоставление возможности предкурсового ознакомления с содержанием учебной дисциплины и материалом по курсу за счёт размещения информации на корпоративном образовательном портале;
- применение дополнительных средств активизации процессов запоминания и повторения;
- опора на определенные и точные понятия;
- использование для иллюстрации конкретных примеров;
- применение вопросов для мониторинга понимания;
- разделение изучаемого материала на небольшие логические блоки;
- увеличение доли конкретного материала и соблюдение принципа от простого к сложному при объяснении материала;
- наличие чёткой системы и алгоритма организации самостоятельных работ и проверки заданий с обязательной корректировкой и комментариями;
- увеличение доли методов социальной стимуляции (обращение внимания, аппеляция к ограничениям по времени, контактные виды работ, групповые задания др.);
- обеспечение беспрепятственного доступа в помещения, а также пребывания них;
- наличие возможности использовать индивидуальные устройства и средства, позволяющие обеспечить реализацию эргономических принципов и комфортное пребывание на месте в течение всего периода учёбы (подставки, специальные подушки и др.).

Специальные условия, обеспечиваемые в процессе преподавания дисциплины студентам с нарушениями слуха (глухие, слабослышащие, позднооглохшие):

- предоставление образовательного контента в текстовом электронном формате, позволяющем переводить аудиальную форму лекции в плоскопечатную информацию;
- наличие возможности использовать индивидуальные звукоусиливающие устройства и сурдотехнические средства, позволяющие осуществлять приём и передачу информации; осуществлять взаимообратный перевод текстовых и аудиофайлов (блокнот для речевого ввода), а также запись и воспроизведение зрительной информации;
- наличие системы заданий, обеспечивающих систематизацию вербального материала, его схематизацию, перевод в таблицы, схемы, опорные тексты, глоссарий;
- наличие наглядного сопровождения изучаемого материала (структурно-логические схемы, таблицы, графики, концентрирующие и обобщающие информацию, опорные конспекты, раздаточный материал);
- наличие чёткой системы и алгоритма организации самостоятельных работ и проверки заданий с обязательной корректировкой и комментариями;
- обеспечение практики опережающего чтения, когда студенты заранее знакомятся с материалом и выделяют незнакомые и непонятные слова и фрагменты;
- особый речевой режим работы (отказ от длинных фраз и сложных предложений, хорошая артикуляция; четкость изложения, отсутствие лишних слов; повторение фраз без изменения слов и порядка их следования; обеспечение зрительного контакта во время говорения и чуть

более медленного темпа речи, использование естественных жестов и мимики);

- чёткое соблюдение алгоритма занятия и заданий для самостоятельной работы (называние темы, постановка цели, сообщение и запись плана, выделение основных понятий и методов их изучения, указание видов деятельности студентов и способов проверки усвоения материала, словарная работа);
- соблюдение требований к предъявляемым учебным текстам (разбивка текста на час¬ти;
   выделение опорных смысловых пунктов; использование наглядных средств);
- минимизация внешних шумов;
- предоставление возможности соотносить вербальный и графический материал; комплексное использование письменных и устных средств коммуникации при работе в группе;
- сочетание на занятиях всех видов речевой деятельности (говорения, слушания, чтения, письма, зрительного восприятия с лица говорящего).

Специальные условия, обеспечиваемые в процессе преподавания дисциплины студентам с прочими видами нарушений (ДЦП с нарушениями речи, заболевания эндокринной, центральной нервной и сердечно-сосудистой систем, онкологические заболевания):

- наличие возможности использовать индивидуальные устройства и средства, позволяющие осуществлять приём и передачу информации;
- наличие системы заданий, обеспечивающих систематизацию вербального материала, его схематизацию, перевод в таблицы, схемы, опорные тексты, глоссарий;
- наличие наглядного сопровождения изучаемого материала;
- наличие чёткой системы и алгоритма организации самостоятельных работ и проверки заданий с обязательной корректировкой и комментариями;
- обеспечение практики опережающего чтения, когда студенты заранее знакомятся с материалом и выделяют незнакомые и непонятные слова и фрагменты;
- предоставление возможности соотносить вербальный и графический материал; комплексное использование письменных и устных средств коммуникации при работе в группе;
- сочетание на занятиях всех видов речевой деятельности (говорения, слушания, чтения, письма, зрительного восприятия с лица говорящего);
- предоставление образовательного контента в текстовом электронном формате;
- предоставление возможности предкурсового ознакомления с содержанием учебной дисциплины и материалом по курсу за счёт размещения информации на корпоративном образовательном портале;
- возможность вести запись учебной информации студентами в удобной для них форме (аудиально, аудиовизуально, в виде пометок в заранее подготовленном тексте);
- применение поэтапной системы контроля, более частый контроль выполнения заданий для самостоятельной работы;
- стимулирование выработки у студентов навыков самоорганизации и самоконтроля;
- наличие пауз для отдыха и смены видов деятельности по ходу занятия.

#### 10. Методические рекомендации по освоению дисциплины (модуля)

Учебная работа по направлению подготовки осуществляется в форме контактной работы с преподавателем, самостоятельной работы обучающегося, текущей и промежуточной аттестаций, иных формах, предлагаемых университетом. Учебный материал дисциплины структурирован и его изучение производится в тематической последовательности. Содержание методических рекомендаций должно соответствовать требованиям Федерального государственного образовательного стандарта и учебных программ по дисциплине. Самостоятельная работа студентов может быть выполнена с помощью материалов, размещенных на портале поддержки Moodl.