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**МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РОССИЙСКОЙ
ФЕДЕРАЦИИ**

**Федеральное государственное автономное образовательное учреждение
высшего образования**

«СЕВЕРО-КАВКАЗСКИЙ ФЕДЕРАЛЬНЫЙ УНИВЕРСИТЕТ»

Пятигорский институт (филиал) СКФУ

**МЕТОДИЧЕСКИЕ УКАЗАНИЯ ПО ВЫПОЛНЕНИЮ ПРАКТИЧЕСКИХ РАБОТ
ПО ДИСЦИПЛИНЕ «Иностранный язык в сфере профессиональной
коммуникации»**

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Методические указания по выполнению практических работ рассмотрены и утверждены на заседании кафедры лингвистики и межкультурной коммуникации

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ВВЕДЕНИЕ

Методические указания предназначены для студентов 1 курса бакалавров очной формы обучения, которыми они могут пользоваться при подготовке к практическим занятиям. Практические занятия это планируемая учебная, учебно-исследовательская, а также научно-исследовательская работа студентов, которая выполняется в аудиторное время под руководством преподавателя. В составе методических указаний к практическим занятиям предусмотрены рекомендации по подготовке к практическому занятию. При выполнении работы студенты могут использовать не только методические указания по решению задач, но и другие материалы учебно-методического комплекса.

Дисциплина «Иностранный язык в профессиональной сфере» ориентирована на:

- * развитие навыков понимания устной речи общей и профессиональной тематики, включая понимание речи носителей языка и восприятие речи с медиа-источников;
- * понимание особенностей стилей общения в рамках деловых ситуаций и ситуаций повседневного общения;
- * преодоление языкового барьера и улучшение навыков разговорного английского языка;
- * повышение грамотности устной и письменной речи;
- * расширение активного словарного запаса по тематике общего и профессионального английского языка по профилю подготовки;
- * повышение общего уровня владения языком.

Целью освоения дисциплины «Иностранный язык в профессиональной сфере» является формирование у студентов компетенций УК-4 как основы профессиональной подготовки для реализации своих способностей в общении на иностранном языке и готовности использовать их в профессиональной деятельности.

Задачи освоения дисциплины: овладение основами профессионального общения на иностранном языке в устной и письменной форме, расширение активного словарного запаса по тематике общего и профессионального английского языка, формирование коммуникативных компетенций.

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- навыками профессионального общения на английском языке;
- способами пополнения профессиональных знаний из оригинальных источников на английском языке.
- готовностью к работе в контактной зоне с потребителем, консультированию, согласованию вида, формы и объема процесса сервиса на иностранном языке;
- навыками перевода профессиональной литературы с иностранного языка на русский язык;

СОДЕРЖАНИЕ ПРАКТИЧЕСКИХ ЗАНЯТИЙ

РАЗДЕЛ 1. FIELDS OF CIVIL AND INDUSTRIAL ENGINEERING /ОБЛАСТИ ГРАЖДАНСКОГО И ПРОМЫШЛЕННОГО СТРОИТЕЛЬСТВА

Практическое занятие №1.

Тема 1. From the History of Building/ История строительства.

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

0. dwell (dwelt)	жить, обитать, находиться, пребывать
1. cave	пещера
2. mud	грязь, слякоть; ил, тина
3. wood	дерево
4. stone	камень
5. find out	узнать, разузнать, выяснить; понять
6. brick	кирпич
7. dry	сухой; сушить
8. ancient	древний
9. discover	открывать
0. cut	резать; рубить, валить (лес)
1. erect	сооружать; воздвигать, строить (о здании)
2. temple	храм; церковь
3. tomb	могила; надгробие; мавзолей
4. commemorate	почтить память
5. huge	огромный
6. as well as	так же как, а также
7. pillar	столб, колонна; опора, стойка
8. support	опора; поддерживать, подпира́ть; нести нагрузку
9. bridge	мост
0. harbour	гавань; порт; прибежище, пристанище
1. basic	основной
2. kiln	печь для обжига и сушки
3. fire	обжигать (керамику, кирпичи и т.п.)
4. remain(s)	остатки, следы прошлого; оставаться
5. remind	напоминать
6. suggest	предлагать
7. dome	купол; верх, верхушка, свод (большого здания)
8. famous	известный

0.	disappear	исчезать
1.	complete(ly)	заканчивать, завершать; полный; полностью
2.	lose (lost, lost)	терять, потеряться
3.	fusion	интеграция, объединение, слияние
4.	rest	лежать на; опираться
5.	recent	недавний, последний
6.	evidence	доказательство, подтверждение; свидетельство
7.	hold together	спланировать(ся)
8.	trace back	выяснять происхождение, проследить
9.	prove	доказывать; удостоверить
0.	borrow	заимствовать
1.	sample	образец, образчик, экземпляр
2.	throughout	повсюду; на всем протяжении

From the history of building

Many thousands of years ago, there were no houses such as people live in today. In hot countries, people sometimes made their homes in the trees and used leaves to protect themselves from rain or sun. In colder countries, they dwelt in caves. Later people left their caves and trees and began to build houses out of different materials such as mud, wood or stones.

Later people found out that bricks made of mud and dried in the hot sunshine became almost as hard as stones. In Ancient Egypt especially, people learned to use these sun-dried mud bricks. Some of their buildings are still standing after several thousands of years. The Ancient Egyptians discovered how to cut stone for building purposes. They erected temples, palaces and huge tombs. The greatest tomb is the stone pyramid of Khufu, king of Egypt. The ancient Egyptians often erected their huge constructions to commemorate their kings or pharaohs.

The ancient Greeks also understood the art of building with cut stone, and their buildings were beautiful as well as useful. They often used pillars partly for supporting the roofs and partly for decoration. Parts of these ancient buildings can still be seen today in Greece.

The Romans were great bridge, harbour and road builders. In road, work the Romans widely used timber piles. They also erected aqueducts, reservoirs, water tanks, etc. Some of their constructions are still used till now. It is known that the manufacture of lime is one of the oldest industries used by man. Lime is a basic building material used all over the world as today so in the ancient world. One of the Romans, Marcus Porcius Cato, gave an idea of a kiln for lime production: its shape and dimensions. Such kilns were fired with wood or coal and were extremely inefficient. There are still many remains of kilns in some places of Great Britain as well as roads and the famous Hadrian Wall, which was erected to protect Romans from the Celtic tribes in the first century A.D. Britain was a province of the Roman Empire for about four centuries. There are many things today in Britain to remind the people of the Roman: towns, roads, wells and the words.

In a period of 800 to 900 years the Romans developed concrete to the position of the main structural material in the empire. It is surprising, therefore, that after the fall of the Empire, much of the great knowledge should have disappeared so completely. The knowledge of how to make durable concrete has been lost for centuries, but mention was made of it in the writings of architects from time to time. Fusion of Roman and North European traditions in construction was reflected in many ways. Buildings combined the Roman arch and the steep peaked roof of Northern Europe. Roman traditions were continued in the architectural form known as Romanesque. London Bridge, finished in 1209, took thirty-three years to build. It consisted of nineteen irregular pointed arches with its piers resting on broad foundation, which was designed to withstand the Thames current.

The Roman period was followed by other periods each of which produced its own type of architecture and building materials. During the last hundred years many new methods of building have been discovered. One of the recent discoveries is the usefulness of steel as a building material.

Nowadays when it is necessary to have a very tall building, the frame of it is first built in steel and then the building is completed in concrete. Concrete is an artificial kind of stone, much cheaper than brick or natural stone and much stronger than they are. The Egyptians employed it in the construction of bridges, roads and town walls. There are evidences than ancient Greeks also used concrete for the building purposes. The use of concrete by the ancient Romans can be traced back as far as 500 B.C. They were the first to use it throughout the ancient Roman Empire on a pretty large scale and many structures made of concrete remain till nowadays thus proving the long life of buildings made of concrete. Of course, it was not the concrete people use today. It consisted of mud, clay and pure lime, which were used to hold together the roughly broken stone in foundations and walls. It was so-called "pseudo-concrete". The idea of such building material might have been borrowed from the ancient Greeks as some samples of it were found in the ruins of Pompeii.

Вопросы и задания:

Exercise 1. Прочитайте, переведите следующие предложения и отметьте, какие из них относятся к египетскому, греческому и римскому искусствам строительства в древности.

1. They first used sun-dried mud bricks for building.
2. In a period of 800-900 they developed concrete to the position of main structural material.
3. Their buildings were beautiful as well as useful.
4. They learned how to cut stone for building purposes.
5. They often used pillars partly for supporting the roofs and partly for decoration.
6. They used concrete for construction of bridges roads and town walls.
7. First kilns for lime production appeared in this country.
8. In ancient times concrete for building purposes was first used in this country.
9. They erected their huge constructions to commemorate their kings.
10. They were great bridge and road builders in old times.

Exercise 2. Закончите следующие предложения в соответствии с текстом. Предложения переведите на русский язык.

1. Many thousands of years ago there were no houses ...
2. In hot countries people made their homes ...
3. In colder countries they ...
4. In ancient time kilns for lime production were fired by ...
5. The knowledge of how to make durable concrete ... for centuries.
6. After the Fall of the Roman Empire Roman traditions were continued ...
7. Buildings combined the Roman arch and ...
8. During the last hundred years many methods of building....
9. One of the most recent discoveries is ...
10. Nowadays the frame of a tall building is first ... and then ...

Exercise 3. Закончите следующие предложения, используя английские эквиваленты из текста в соответствии с текстом. Предложения переведите на русский язык.

1. Concrete is an artificial kind of stone, намного дешевле и прочнее, than brick or natural stone.
2. The Egyptians used concrete для строительства мостов, дорог и городских стен.
3. Существуют доказательства that ancient Greeks also used concrete in building purposes.
4. The use of concrete by the ancient Romans может быть прослежен еще в 500 году до нашей эры).
5. They were the first to use it throughout the ancient Roman Empire в довольно широких масштабах.
6. Concrete in old times consisted of mud, глины, чистой извести и грубого(неровного) щебня.
7. London Bridge finished in 1209 was designed on broad foundation (чтобы противостоять течению Темзы).

Практическое занятие №2.

Тема 2. From the history of building. Tower of Babel.

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;
- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

1. carry out a plan – выполнить план
2. get more loads – взять больше груза
3. heaven ['hevɪn] – n небо, небеса
4. invade [ɪn'veɪd] – v вторгаться, захватывать; ~er n захватчик; посягатель
5. lay the bricks – класть кирпичи
6. mortar ['mɔ:tə] – n раствор
7. pile up – нагромождать, зд. возводить, строить
8. ruin [ruɪn] – v разрушить
9. split (up) – v разделить (на группы и т. п.), расколоть; поссорить
10. stairway ['steɪweɪ] = staircase['steɪkeɪs] – n лестница
11. to be lacking – быть недостаточным
12. to keep – хранить, содержать
13. heaven – небеса
14. angel – ангел
15. to order – приказать
16. to pile up – возводить
17. the east side – восточная сторона
18. stairway – лестница
19. the west – запад
20. load – груз
21. invader – захватчик, интервент
22. to cooperate – сотрудничать
23. to split – разделять
24. a tongue – язык
25. understandable – понятный
26. to lay – класть
27. a mess – беспорядок
28. to blame – обвинять
29. to be ruined – быть разрушенным

Tower of Babel. “How the Ancient Builders Put a Hand to the Development of Different Languages”

1. The people of Babylonia were rich and powerful. They were also happy. They loved each other and *they enjoyed working together¹. *But one thing was lacking². Men had only the earth to enjoy. God had kept heaven for himself and his angels.
2. The King of Babylonia decided that his people should have Heaven as well as Earth. So he ordered them to build a great tall tower. Six hundred thousand men began making bricks and mixing mortar and piling up a building higher and higher. All day every day men carried bricks and mortar up a stairway on the east side of the tower. Then they walked down another stairway on the west to get more loads. This went on for forty-two years until the Tower was twenty-seven miles high. It was so high that it took a man a whole year to carry bricks from the ground to the top.
3. Now the Tower had risen nearly to Heaven, and God saw that he would have to do something to keep the invaders out. Perhaps if he made it hard for people to co-operate, they would not be able to finish the Tower. To carry out his plan God sent seventy angels down to Earth. The angels had orders: first to take away the one language everybody understood, then to split the people up into groups, with each group speaking a new tongue of its own.
4. *In no time³ the men who made bricks couldn't talk to the men who carried them. And the men who carried bricks couldn't say an understandable word to the men who laid the bricks. Everything was a mess, and everybody blamed everybody else for not understanding. People no longer talked about the Tower of Heaven. Nobody worked there any longer. And the Tower was soon ruined.

Notes to the text:

1. ...they enjoyed working together. – ...им нравилось работать вместе.
2. But one thing was lacking. – но не хватало одного.
3. In no time... – в мгновение ока
4. General Understanding. Answer the questions to the text:
 1. What language did the ancient Babylonians speak?
 2. What were they lacking?
 3. What did the king of Babylonia decide to do?
 4. Was God glad to see the building of the tower to the Heaven?
 5. How many angels were sent down to Earth?
 6. What orders did they have?
 7. Were they successful?
 8. The Tower was ruined, wasn't it?

Вопросы и задания:

Exercise 1. Answer to the following test

1. In ancient Babylonia only one thing was lacking
 - a) men had only the earth to enjoy
 - b) God had kept heaven for everyone
 - c) the king of Babylonia was rich and powerful
2. The king of Babylonia decided _____, so he ordered _____.
 - a) to build a great tall tower, to keep heaven
 - b) to enjoy working together, to make bricks
 - c) to have heaven for his people, to build a tower
3. _____ men began making bricks and mixing mortar
 - a) 60 000
 - b) 6 000
 - c) 600 000
4. Men carried bricks and mortar up a stairway _____ and walked down _____ of the tower.
 - a) west side, north side
 - b) east side, west side
 - c) east side, south side
5. The building went on for _____ until the Tower was _____.

- a) 52 years, 207 miles high
- b) 32 years, 20 miles high
- c) 42 years, 27 miles high
- 6. When the Tower _____, God decided _____
- a) was ruined, to reconstruct it
- b) had risen nearly to heaven, to keep the invaders out
- c) was being built, to cooperate with people
- 7. God sent _____ and gave order _____
- a) 70 angels down to Earth, to take away common language
- b) 17 orders, to create a new tongue
- c) 7 tongues, to split the people up into groups
- 8. No one man could _____ and everybody _____ for not understanding.
- a) carry bricks, made mortar
- b) work there any longer, laid the bricks
- c) say an understandable word, blamed everybody

Exercise 2. Write down the composition “History of Building”. Pay attention to the differences of using building materials in different periods and invention of new methods and constructive forms. Add some more information and facts to your composition.

Практическое занятие №3.

Тема 3. “Engineering and Its Present Status” / Строительство и его современное состояние.

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Актуальность темы: обусловлена необходимостью овладения УК-4

Теоретическая часть:

Vocabulary

1. to shape , v - принимать форму
2. to fit, v - устанавливать
3. to stand up v - выдерживать
4. to break v - разрушать
5. to catch fire v - загореться
6. to define v - определять
7. to deal with, v – иметь дело с
8. to lay the foundation, v – закладывать фундамент
9. to enable v - давать возможность
10. execution n - выполнение
11. engineering techniques, n – технические средства

12. factual approach, n – фактический подход
13. strikingly adv - удивительно
14. bulk of engineering, n- объём инженерного искусства
15. to allow v - предоставлять
16. off-the-shelf approach, n - стандартный подход
17. to customize v - выполнять по индивидуальному заказу
18. technical design, n - техническое проектирование
19. environmental compliance, n - соответствие с окружающей средой
20. diversity n - разнообразие
21. affinity n - близость
22. creative adj - творческий
23. to expect v - ожидать
24. tailored adj - приспособленный
25. selective adj - избирательный

“Engineering and Its Present Status”

Engineering is the art and science by which the properties of matter and energy are made useful to man in structures, machines and products. The basis of engineering is knowledge of the materials used, knowledge of how they are made, how they are shaped, how you fit them together, how they stand up to stress, how they break and how they catch fire. Civil engineering is defined as that phase of engineering which deals with the planning, design and construction of projects.

The branch of civil engineering provides for the initial development of natural resources and lay the foundation for other technical progress.

There are greatest opportunities today for civil engineers in construction than at any previous time in the history of our country. These opportunities enable engineer to take a basic part in the conception design and execution of problems which are essential to the growth, development and defense of our country.

The application of engineering techniques to construction makes civil engineering the only factual approach to construction problems.

Engineering is a constantly changing and developing profession. Invention, the adoption of some strikingly new device, method or technique play a part in this continuing evolution. But the great bulk of engineering consists in doing better something that has been done many times before.

Engineering works have been built for the use and convenience of man.

They mark the increasing mastery of man over nature, which has made possible our continuing progress toward a better life.

Engineering tasks nowadays are different from those 10-15 years ago when stable business structures allowed off-the-shelf approach to technical design.

Present designs, by contrast, are increasingly customized and might incorporate such factors as regional diversity reflecting a closer understanding of the market and affinity to the needs of society.

Engineering becomes a very creative profession and global markets today demand creativity.

The most creative and elegant engineering solutions are expected from the engineer combining his knowledge of technology with the demands of business, economics and people. The need to develop products and services faster, cheaper and better than ever before is obvious.

Customers are more selective and require production tailored for specific needs, delivered quickly and anywhere with no reduction in quality.

Builders have constructed the tallest, longest, largest and deepest structures in history.

As a result, mankind in the 21st century is better off with the proper food, sanitation, housing and all material comforts which modern science, engineering and industry can provide.

Вопросы и задания:

Exercise 1. Choose the correct word from the two words given in brackets.

1. Engineering is the art and science by which the properties of matter and energy are made

(useless, useful) for man in structures and products.

2. The basis of engineering is (knowledge, skill) of the materials used, their properties and mathematics.
3. Civil engineering deals with (destruction, construction) of various projects.
4. Engineering (works, tasks) have been built for the use and convenience of man.
5. Engineering is a (temporary, constantly) changing and developing profession.
6. There are (more, less) opportunities today for civil engineering in construction than before.
7. Engineering works mark the (increasing, decreasing) mastery of man over nature.
8. Global markets demand (creativity, novelty).
9. The need to develop products faster, cheaper and better is (obvious, premature).
10. (Much, little) is expected of the builders and designers in the future.

Exercise 2. Put the words in brackets in the correct form.

1. She is ... (little) experienced than her friends.
2. Do you think ... (the same as) other members of your group?
3. This article is ... (much difficult) than the previous one.
4. Oxford is one of the ... (old) and (famous) universities in the world.
5. The ... (hard) you work, the (good) the result will be.
6. This problem was ... (little interesting) than I expected.
7. My flat isn't ... big ... yours.
8. That building will be ... (high) in our district.
9. Research opportunities are ... (much wide) today than before.

Exercise 3. Match the words and their definitions.

1. to shape a. particular, certain needs
2. design b. the work of building
3. to deal with c. to make the form of something
4. affinity d. to do business or connection
5. construction e. close likeness or connection
6. approach f. a drawing showing how something is to be made
7. specific needs g. a manner or method of doing something

Exercise 4. Translate the following sentences into Russian.

1. Civil engineering is defined as that phase of engineering which deals with the planning, design and construction of projects.
2. The branch of civil engineering provides for the initial development of natural resources and lays the foundation for other technical progress.
3. Engineering is a constantly changing and developing profession.
4. Engineering works have been built for the use and convenience of man.
5. Builders have constructed the tallest, strongest, largest and deepest structures in history.
6. The application of engineering techniques to construction makes civil engineering the only factual approach to construction problems.
7. The great bulk of engineering consists in doing better something that has been done many times before.
8. The most creative and elegant engineering solutions are expected from the engineer who combines his knowledge of technology with the demand of business, economics and people.
9. Customers are more selective now and require production tailored for specific needs, delivered quickly and anywhere with no reduction in quality.

Exercise 5. Do you agree or disagree with the following opinion?

Use the given phrases:

Yes, I think so I don't think so

I certainly agree with you I doubt it

I am sure you are right I disagree (with you)

1. There are less opportunities today for civil engineers in construction than before.
2. The basis of engineering is knowledge of materials used and mathematics.
3. Civil engineering never dealt with planning, design or construction of various projects.
4. Present designs are very simple but interesting.
5. Engineering tasks nowadays are practically the same as 10 - 15 years ago.
6. Our cities should be comfortable and beautiful.
7. The type and style of dwellings in urban areas depend on natural conditions and local traditions.
8. The problem of the house is the problem of the epoch.
9. People and buildings require sunlight and air.
10. New housing is characterized by the wide expense of glazing and the development of public services and communication.

Практическое занятие №4.

Тема 4. Civil Engineering.

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Актуальность темы: обусловлена необходимостью овладения УК-4

Теоретическая часть:

VOCABULARY TO USE

appliance — приспособление, прибор

apply — обращаться (*for* — за помощью, справкой и т.д., *to* — к кому-л)

branch — ветвь; филиал; отрасль

concern (with) — касаться, относиться; интересоваться

conflict with nature — противоречить природе, бороться с природой

deal (with) — иметь дело с чем-л., кем-л.

distinguish (from) — отличать

execute — выполнять

harbor — гавань

lead (to) — вести (к)

sustain] — поддерживать; выдерживать

engine — двигатель

military — военный

nuclear — ядерный

mining — горный, горнодобывающий

marine – морской
rise – возникновение, подъем
utilization – использование
fortification – укрепление
to enrich – обогатить, разнообразить
remarkable – замечательный, отличный
steam – engine – паровой двигатель
growth – рост, увеличение
space – космос
to comprise – содержать
pavement – тротуар
vast – обширный, громадный
extent – степень, мера

Text : “Civil Engineering”

The term "*engineering*" is a modern one. The New Marriam-Webster Dictionary gives the explanation of the word "*engineering*" as the practical application of scientific and mathematical principles. Nowadays the term "*engineering*" means, as a rule, the art of designing, constructing or using engines. But this word is now applied *in a more extended sense.¹ It is applied also to the art of executing such works as the objects of civil and military architecture, in which engines or other mechanical appliances are used. Engineering is divided into many branches. The most important of them are: civil, mechanical, electrical, nuclear, mining, military, marine and sanitary engineering.

While the definition "*civil engineering*" dates back only two centuries, the profession of civil engineer is as old as civilized life. It started developing with the rise of ancient Rome. In order to understand clearly what civil engineering constitutes nowadays, let us consider briefly the development of different branches of engineering. Some form of building and utilization of the materials and forces of nature have always been necessary for the people from the prehistoric times. The people had to protect themselves against the elements and sustain themselves in the conflict with nature.

First the word "*civil engineering*" was used to distinguish the work of the engineer with a non-military purpose from that of a military engineer. And up to about the middle of the 18th century there were two main branches of engineering — civil and military. *The former included all those branches of the constructive art not directly connected with military operations and the constructions of fortifications, while the latter², military engineering, concerned itself with the applications of science and the utilization of building materials in the art of war.

But as time went on, the art of civil engineering was enriched with new achievements of science. With the beginning of the Industrial Revolution and later there came a remarkable series of mechanical inventions, great discoveries in electrical science and atomic energy. It led to differentiation of mechanical, electrical, nuclear engineering, etc.

It is a well-known fact that with the invention of the steam engine and the growth of factories a number of civil engineers became interested in the practical application of the science of mechanics and thermodynamics to the design of machines. They separated themselves from civil engineering, and were called "*mechanical engineers*".

With the development of the science of electricity, there appeared another branch of the engineering — electrical engineering. It is divided now into two main branches: communications engineering and power engineering.

In the middle of the 20th century there appeared some other new branches of engineering— nuclear engineering and space engineering. The former is based on atomic physics, the latter — on the achievements of modern science and engineering.

At present there are hundreds of subdivisions of engineering, but they all, at one time or another, branched off from civil engineering.

The term "civil engineering" has two distinct meanings. In the widest and oldest sense it includes all non-military branches of engineering as it did two centuries ago. But in its narrower, and at the present day more correct sense, civil engineering includes mechanical engineering, electrical engineering, metallurgical and mining engineering.

*Here are some fields of civil engineering³:

1. *Housing, industrial and agricultural construction.*

2. *Structural engineering* comprises the construction of all fixed structures with their foundations.

3. *The construction of highways and city streets and pavements.*

4. *The construction of railroads.*

5. *The construction of harbours and canals.*

6. *Hydraulic engineering* which includes the construction of dams and power plants.

The above enumeration will make clear the vast extent of the field of civil engineering.

A few explanations to the text

1.... in a more extended sense — в более широком смысле

2. The former..., while the latter... — первый (имеется в виду из двух упомянутых)..., тогда как последний... (из двух упомянутых)

3. Here are some fields of civil engineering. — Вот некоторые области строительства.

Вопросы и задания:

Exercise 1. Word construction (Different ways to construct words). Translate the words keeping in mind their suffixes and prefixes

military — **non**-military — militarisation; enumerate — enumeration;

decide — decision — decision-maker; invent — inventor—invention;

apply — appliance — application; explain — explanatory — explanation;

build — builder — building —rebuilt; achieve—achievement;

construct — constructor—construction — constructive—reconstruct

Exercise 2. General understanding. Answer the questions

1. What does the word "engineering" mean?

2. Is engineering a science?

3. Into what branches is civil engineering divided?

4. How old is the profession of a civil engineer?

5. What distinct meanings has the term "civil engineering"?

6. What fields of civil engineering do you know?

7. What are the most important branches of civil engineering?

8. What invention laid the foundation for mechanical engineers?

9. When was electrical engineering developed?

10. What are the main subdivisions of the electrical engineering?

Exercise 3. Find in the text all kinds of engineering and using words from ex. 3, fill the table. Pay attention to some peculiarities of the certain type of engineering and what it deals with

Titles

Definitions

Exercise 4. Explain these phrases, using your knowledge of building terms and new words

a) the practical application of scientific and math principles,

b) the art of designing and constructing, using engines,

c) the objects of civil and military architecture,

d) utilization of the materials and forces of nature

- e) applications of science and the utilization of building materials in the art of war,
- f) Industrial Revolution and mechanical invention.

Exercise 4. Be ready with a brief report concerning famous and the most interesting structures all over the world, their designers and constructors, some interesting facts about their life

Exercise 4. Compose the conversation for a group of 3-4 students about civil engineering, using information from the text and your report

Follow this plan:

- a) the history of civil engineering,
- b) civil engineering is the art of some sciences and technologies,
- c) some important and interesting facts about famous architects and constructors, their life and achievements.

Практическое занятие №5.

Тема5. Geotechnical engineering. Transportation engineering / Инженерная геология. Транспортное проектирование.

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Актуальность темы: обусловлена необходимостью овладения УК-4

Теоретическая часть:

Geotechnical engineering

The main subject of the field of geotechnical engineering is concerned with foundations, soil properties, soil mechanics, compression and swelling of soils, seepage, slopes, embankments, retaining walls, ground and rock anchors, use of synthetic tensile materials in soil structures, soil structure interaction, and soil dynamics.

Transportation engineering

Transportation engineering is concerned with moving people and goods efficiently, safely, and in a manner conducive to a vibrant community. This involves specifying, designing, constructing, and maintaining transportation infrastructure which includes streets, highways, rail systems, airports, ports, and mass transit. It includes areas such as transportation design, transportation planning, traffic engineering, urban engineering, queuing theory, pavement engineering, Intelligent Transportation System (ITS), and infrastructure management.

I. Find English equivalents in the text:

механика грунта-

земляной вал -

сжатие и набухание грунта -

подпорная стена -
анкерные крепления -
растяжимый (эластичный) материал -
динамические воздействия на грунт -
свойства грунта -
фильтрационный расход -
откос -
большой населенный пункт -
общественный транспорт -
транспортное конструирование -
проектирование движения -
проектирование городского движения -
теория массового обслуживания -
проектирование тротуаров -
интеллектуальная транспортная система -
управление объектами капитального строительства -

II. Give Russian equivalents to the following:

foundation -
to be concerned with -
use -
synthetic -
interaction -
moving -
goods -
efficiently -
safely -
in a manner -
specifying -
maintaining -
highways -
include -
transportation engineering -

III. Translate the text and say whether these statements are true or false:

1. Geotechnical engineering is concerned with soil structure interaction, soil dynamics and maintenance of fixed structures.
2. Soil properties is one of the main subjects which is concerned with the field of geotechnical engineering.
3. Moving people and goods efficiently is one of the main tasks of transportation engineering.
4. Transportation infrastructure includes water supply and irrigation.
5. The main subject of the field of transportation engineering is concerned with transportation design, transportation planning, traffic engineering and urban engineering.

IV. Choose the right variant:

1. The main subject of the field of geotechnical engineering is concerned with foundations.
 - a) Основным предметом для изучения инженерной геологии являются фундаменты.
 - б) Главным объектом исследования в области инженерной геологии являются фундаменты.
 - в) Изучение области инженерной геологии связано главным образом с фундаментами.
- V. Transportation engineering is concerned with moving people and goods efficiently.
 - a) Транспортное проектирование - это передвижение людей и товаров эффективно.
 - б) Транспортное проектирование связано с эффективным перемещением людей и товаров.
 - в) Транспортное проектирование связано с перемещением людьми товаров эффективно.

VI. This involves specifying, designing, constructing and maintaining transportation infrastructure.

- а) Это включает спецификацию, дизайн, конструкцию и поддержку транспортной инфраструктуры.
- б) Это включает в себя подробное описание, проектирование, строительство и обслуживание транспортной инфраструктуры.
- в) В это входит подробное описание, дизайн, конструирование и поддержание транспортной инфраструктуры.

6. **Continue the sentence:**

2. The main subject of geotechnical engineering is concerned with ...
- а) foundations, soil properties and railway systems.
- б) compression and swelling of soils, soil structure interaction and soil dynamics.
- с) foundations, retaining walls and girders.
3. Transportation engineering is concerned with moving .
- а) goods efficiently.
- б) people and goods in time.
- с) People and goods efficiently and safely.
4. Moving people and goods involves ...
- а) constructing and maintaining transportation infrastructure.
- б) planning, constructing and maintaining of fixed structures.
- с) Designing, constructing and maintaining transportation infrastructure.

VII. Transportation infrastructure includes .

7. roads, railways, power plants and traffic.
8. streets, railways, bridges, water supply and airports.
9. streets, rail systems, airports, ports and mass transit.

VII. a) Complete the table:

Noun	Verb	Adjective
		compressed
	Move	
specification		
		transported
management		
	Design	
		constructed

5. **Choose the word from the table to complete the sentence:**

- д) Geotechnical engineering deals with soil properties, . and swelling of soils and many other things.
- е) The main task of transportation engineering is . people and goods efficiently.
- ф) Streets, highways, rail systems and ports are a part of ... infrastructure.
- г) To move people and goods efficiently one should ., design, . and maintain transportation infrastructure.
- х) Transportation engineering includes transportation ., transportation planning, traffic engineering, infrastructure . and things like that.

VIII. Scan the text and answer the questions:

- д) Is geotechnical engineering concerned with maintaining transportation infrastructure?
- е) What kinds of soil properties concern geotechnical engineering?
- ф) What is transportation engineering concerned with?
- г) What does moving people and goods involve?
- х) What does transportation infrastructure include?
- и) Does transportation infrastructure deal with traffic, urban and pavement engineering?

Практическое занятие №6.

Тема 6. Environmental engineering/ Инженерное обеспечение охраны окружающей среды

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Актуальность темы: обусловлена необходимостью овладения УК-4

Теоретическая часть:

Environmental engineering/ Инженерное обеспечение охраны окружающей среды

Wastewater treatment is a critical activity in environmental engineering, a sub-discipline of civil engineering.

Environmental engineering deals with the treatment of chemical, biological, and/or thermal waste, the purification of water and air, and the remediation of contaminated sites, due to prior waste disposal or accidental contamination. Among the topics covered by environmental engineering are pollutant transport, water purification, sewage treatment, and hazardous waste management. Environmental engineers can be involved with pollution reduction, green engineering, and industrial ecology. Environmental engineering also deals with the gathering of information on the environmental consequences of proposed actions and the assessment of effects of proposed actions for the purpose of assisting society and policy makers in the decision making process.

Environmental engineering is the contemporary term for sanitary engineering. Some other terms in use are public health engineering and environmental health engineering.

Find English equivalents in the text:

- обработка сточных вод -
- термические отходы -
- очистка воздуха -
- восстановление загрязненных мест -
- загрязняющий транспорт -
- обработка нечистот -
- обработка опасных отходов -
- снижение степени загрязнения -
- озеленение -
- оценка(оценивание) -
- последствия от предложенных действий -
- содействие -
- политические деятели -
- коммунальные службы -
- здоровье общества -
- санитарное состояние окружающей среды -

Give Russian equivalents to the following:

- Sub discipline -
- due to -
- disposal -

to cover -
to be involved -
industrial ecology -
to gather -
consequence -
decision -
contemporary -
other terms -

Translate the text and say whether these statements are true or false:

1. Environmental engineering is a subdiscipline of civil engineering.
2. Environmental engineering deals with wastewater treatment.
3. Sewage treatment and hazardous waste management are among topics covered by environmental engineering.
4. Environmental engineers can be involved with contamination.
5. Gathering of information on the environmental consequences of proposed actions is the only task of environmental engineering.
6. Sanitary engineering is the contemporary term for environmental engineering.

Choose the right variant:

Wastewater treatment is a critical activity in environmental engineering.

- а) Расход воды - это критическая деятельность инженерного обеспечения охраны окружающей среды.
- б) Обработка сточных вод - это крайне важная работа в инженерном обеспечении охраны окружающей среды.
- в) Обработка сточных вод - это критическая работа по инженерному обеспечению охраны окружающей среды.

Environmental engineering deals with the treatment ...

- а) Инженерное обеспечение охраны окружающей среды занимается обработкой .
- б) Инженерное обеспечение охраны окружающей среды имеет дело с оздоровлением .
- в) Инженерное обеспечение охраны окружающей среды занимается применением .

Environmental engineers can be involved with .

- а) Специалисты по охране окружающей среды могут быть увлечены .
- б) Специалисты по охране окружающей среды могут заниматься .
- в) Специалисты по охране окружающей среды могут быть вовлечены .

Environmental engineering is the contemporary term for sanitary engineering.

- а) Инженерное обеспечение охраны окружающей среды - это современный термин для санитарной инженерии.
- б) Инженерное обеспечение охраны окружающей среды - это современное название коммунальных служб.
- в) Инженерное обеспечение охраны окружающей среды - это временное название коммунальных служб.

Continue the sentence:

Environmental engineering is a subdiscipline of ...

geotechnical engineering.

sanitary engineering.

civil engineering.

Environmental engineering deals with .

environmental contamination.

the treatment of wastes and the remediation of contaminated sites.

seepage, slopes and embankments.

Pollutant transport is a topic for ...

transportation engineering.

geotechnical engineering.

environmental engineering.
 Environmental engineering can be involved with .
 construction and maintenance of transportation infrastructure.
 pollution reduction and industrial ecology.
 urban engineering, transportation planning and infrastructure management.
 For the purpose of assisting society and policy makers in the decision making process
 environmental engineering deals with .
 the assessment of effects of contamination.
 the Intelligent Transportation System.
 the environmental consequences of proposed actions and the assessment of effects of these
 actions.

VII. a) Complete the table:

Noun	Verb	Adjective
critic		
		purified
	Remediate	
contamination		
	Pollute	
		reduced
proposal		
		decisive
	Assess	

Choose the word from the table to complete the sentence:

1. Environmental engineering concerns the purification of water and air and the . of contaminated sites.
2. Environmental engineers deal with . reduction.
3. Wastewater treatment is a . activity in environmental engineering.
4. Environmental engineering covers also pollutant transport, water ., sewage treatment and things like that.
5. Due to prior waste disposal or accidental contamination, ... sites should be remediated.
6. Environmental engineering involves gathering of information on the environmental consequences of ... actions.
7. Environmental engineering must also gather information on the environmental consequences of proposed actions and . of effects of proposed actions.
8. For the purpose of assisting society and policy makers in the ... making process environmental engineering is to gather information on the environmental consequences of proposed actions.

VIII. Scan the text and answer the questions:

1. What is the relation between environmental engineering and civil engineering?
2. Is wastewater treatment a very important activity in environmental engineering?
3. What does environmental engineering deal with?
4. How do many sites become contaminated?
5. What topics are covered by environmental engineering?
6. What can environmental engineers be involved with?
7. What kind of information does environmental engineering deal with?
8. What is the purpose of gathering of such kind of information?

Практическое занятие №7.

Тема 7. Construction engineering/ Строительная промышленность

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой
Знать:
 - основные способы работы над языковым и речевым материалом;

- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

Construction engineering

Construction engineering concerns the planning and management of the construction of structures such as highways, bridges, airports, railroads, buildings, dams, and reservoirs. Construction of such projects requires knowledge of engineering and management principles and business procedures, economics, and human behavior. Construction engineers engage in the design of structures temporary, cost estimating, planning and scheduling, materials procurement, selection of equipment, and cost control.

Construction Engineering is differentiated from Construction Management from the standpoint of the use of math, science, and engineering to analyze problems and design a construction process. Construction engineers build many of the things that people use everyday. Construction engineering involves many aspects of construction including: commercial, residential, bridges, airports, tunnels, and dams. It is an extremely large industry that provides jobs to many and continues to grow. Currently there are nearly 6 million people working on construction in the United States

Construction engineers are in high demand so it is easy for a CE to get a job in any part of the country.

Find the following words and word combinations in the text:

- касается планирования -
- знание инженерных принципов -
- методы деловой деятельности -
- калькуляция стоимости -
- закупка материалов -
- контроль за расходами -
- планировать процесс строительства -
- коммерческие объекты -
- жилые объекты -
- обеспечивать работой -
- пользоваться большим спросом -
- получить работу -
- планирование и составление калькуляции графиков по проекту -

Give Russian equivalents of the following:

- construction of dams and reservoirs -
- to require knowledge -
- management principles -
- human behavior -
- standpoint -

use of math -
to analyze problems -
to involve many aspects -
an extremely large industry -
selection of equipment -

Translate the text and say whether these statements are true or false:

1. Construction of highways, bridges, airports, railroads, buildings, dams and reservoirs requires knowledge of parts of a building.
2. Construction engineering concerns the planning and management of the construction of structures.
3. The design of structures is only a part of the activities construction engineers engage in.
4. Construction Engineering is almost the same as Construction Management from the standpoint of the use of math.
5. Construction engineering involves only residential building.
6. There are a lot of unemployed people in construction industry in the USA.
7. They don't need any construction engineers in the USA.

Choose the right variant:

Construction engineering concerns the planning and management of the construction of structures ...

- а) Строительная промышленность контролирует планирование и руководство строительства конструкций .
б) Строительная промышленность планирует руководство строительства сооружений .
в) Строительная промышленность занимается планированием и руководством строительства сооружений .

Construction engineers engage in the design of structures .

- а) Инженеры-строители вовлечены в дизайн конструкций ...
б) Инженеры-строители увлечены планированием и сооружениями .
в) Инженеры-строители занимаются проектированием сооружений .

It is an extremely large industry that provides jobs ...

- а) Это очень большая индустрия по найму на работу ...
б) Это чрезвычайно, что большая промышленность проводит работу .
в) Это чрезвычайно большая промышленность, которая обеспечивает работой .

Construction engineers are in high demand so it is easy .

- а) Инженеры-строители очень требовательны, так как легко .
б) Инженеры-строители предъявляют высокие требования, поэтому легко .
в) Инженеры-строители пользуются большим спросом, поэтому это легко .

Continue the sentence:

1. The planning and management of the construction of structures is the main task of .
2. construction process.
3. Construction Engineering.
4. Construction Management.
5. Construction engineers engage in .
6. making laws.
7. selling and buying goods.
8. cost estimating, materials procurement, selection of equipment, etc.
9. Construction engineers build many of the things ...
10. that are out of use today.
11. that people don't need.
12. that people use everyday.
13. Construction engineers .
14. aren't in great demand in the USA.
15. are wanted all over the USA.

16. are out of demand in the USA.

VII. a) Complete the table:

Noun	Verb	Adjective
-	-	constructed
requirement	-	-
-	Design	-
growth	-	-
-	-	building
-	Manage	-
-	-	selected

Choose the word from the table to complete the sentence:

1. Construction of bridges, airports, railroads, buildings and things like that ... knowledge of engineering and management principles.
2. Construction engineering concerns the planning and . of the construction of structures.
3. Construction engineering involves many aspects of .
4. Construction engineering is an extremely large industry and continues .
5. Construction engineers . a lot of things that people use everyday.
6. Construction engineers engage in the design of structures, planning and scheduling, ... of equipment, cost control and so on.
7. Construction engineers engage in the ... of structures.

VIII. Scan the text and answer the questions:

1. Construction of what structures concerns the planning and management in construction engineering?
2. What knowledge does construction of highways, bridges, airports, buildings and things like that require?
3. What do construction engineers deal with?
4. Does Construction Engineering differ from Construction Management?
5. Why are construction engineers very popular among people?
6. What aspects of construction does construction engineering involve?
7. Is construction engineering a large industry?
8. Do many people work on construction in the USA?
9. Are there many unemployed among construction engineers in the USA?

Практическое занятие №8.

Тема8. Construction industry in the United States / Строительная индустрия в США.

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;
- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;
- необходимыми навыками профессионально-делового общения на иностранном языке.

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

Construction industry in the United States.

Construction is the largest industry in the United States. It provides jobs to millions ranging in all types of education. Construction engineers follow the plans of architects and sometimes design the actual structure. After the structure has been designed the engineers make sure it has been built correctly by testing and overseeing the construction.

Tasks - Construction engineers have a lot of responsibilities in their job. Certain tasks have to be completed everyday in order to get the job done correctly. Analyzing reports is a main part of their job description. They must analyze maps, drawings, blueprints, aerial photography and other topographical information. Construction engineers also have to use computer software to design hydraulic systems and structures while following construction codes. They have to calculate load and grade requirements, liquid flow rates and material stress points to ensure that the structure can withstand stress. Keeping a safe workplace is key to having a successful construction company. It is the construction engineer's job to make sure that everything is conducted correctly. In addition to safety, the construction engineer has to make sure that the site stays clean and sanitary. Surveying the land before construction begins is also a job of the construction engineer. They have to make sure that there are no impediments in the way of where the structure will be built and if there are any they must move them. They also must estimate costs and keep the project under budget. Construction engineers have to test the soils and materials used for adequate strength. Finally, construction engineers have to provide construction information, including repairs and cost changes, to the managers.

Find the following words and word combinations in the text:

- обеспечивать работой -
- проектировать полноразмерное сооружение -
- конкретные задания -
- описание работы -
- аэрофотосъемка -
- делать эскизы гидросистем -
- строительные нормы -
- требования по нагрузке и маркировке -
- расход жидкости -
- точка натяжения материала -
- обследование участка -
- в пределах бюджета -
- проверять на достаточную прочность -
- ремонтные работы -
- обеспечивать строительство объекта -

Give Russian equivalents of the following:

1. to follow the plans -

2. to oversee the construction -
3. a main part -
4. to analyze blueprints -
5. topographical information -
6. computer software -
7. to withstand stress -
8. a safe workplace -
9. to conduct correctly -
10. clean and sanitary -
11. an impediment -
12. in the way -
13. cost changes -
14. to test the soils -

Translate the text and say whether these statements are true or false:

1. Construction engineering provides jobs to millions having higher education only.
2. After the structure has been designed the engineers make sure it has been built correctly by testing the soils.
3. The main task of construction engineers concerns analyzing.
4. Construction engineers never use computer software in their work.
5. It is the construction engineer's job to make the site clean and sanitary.
6. Construction engineers have to survey the land before construction begins.
7. The soils and materials used have to be tested for adequate strength by the managers.
8. The managers are to be provided with construction information, including repairs and cost changes.

Choose the right variant:

. engineers make sure it has been built correctly .

- а) . инженеров уверяют в том, что все было построено правильно .
- б) . инженеры удостоверяются в том, что оно было построено правильно .
- в) . инженеры уверены, что оно было построено правильно .

Construction engineers have a lot of responsibilities in their job.

- а) Инженеры-строители имеют много обязательств в своей работе.
- б) Инженеры-строители должны отвечать за свою работу.
- в) Инженеры-строители очень ответственны в своей работе.

They have to calculate load and grade requirements ...

- а) Они должны вычислять нагрузку и сортировать требования ...
- б) Они должны рассчитывать требования по нагрузке и маркировке ...
- в) Им приходится производить калькуляцию нагрузки по требованиям маркировки .

... construction engineer's job is to make sure that everything ...

- а) . работа инженера-строителя состоит в том, чтобы уверять, что все ...
- б) . работа инженера-строителя делает уверенным, что все .
- в) . работа инженера-строителя состоит в том, чтобы убедиться, что все .

Surveying the land before construction begins ...

- а) Обследовав участок, строительство начинается .
- б) Обследование участка до строительства начинается .
- в) Обследование участка до того, как строительство начнется ..

Construction engineers have to test the soils and materials used for adequate strength.

- а) Инженеры-строители имеют пробы почв и материалов, которые используются для достаточной прочности.
- б) Инженеры-строители должны тестировать почвы и применяемые материалы на достаточную прочность.
- в) Инженеры-строители должны тестировать почвы и материалы, применяемые для достаточной прочности.

They also must estimate costs and keep the project under budget.

а) Они также должны оценивать стоимость содержания проекта в пределах бюджета.

б) Они также должны оценивать стоимость и обеспечивать строительство объекта вне бюджета.

в) Они также должны составлять смету расходов и обеспечивать строительство объекта в пределах бюджета.

Continue the sentence:

1. Construction industry provides jobs to .
2. millions having higher education only.
3. millions of people having no education at all.
4. millions having different types of education.
5. Construction engineers follow the plans of architects and ...
6. sometimes make the site clean and sanitary.
7. oversee the construction.
8. decide what the size of the walls must be.
9. The main part of construction engineers' job description is ...
10. making aerial photography.
11. analyzing reports.
12. using computer software.
13. To have a successful construction company means ...
14. to follow construction codes.
15. to calculate load and grade requirements correctly.
16. to keep a safe workplace.
17. Construction engineers also must estimate costs ...
18. to keep a safe workplace.
19. to keep the site clean and sanitary.
20. to keep the project under budget.

VII. a) Complete the table:

Noun	Verb	Adjective
		built
	Response	
description	Calculate	
		required
	Move	
provision		
	Ensure	

Choose the word from the table to complete the sentence:

1. Construction engineers have to make sure that there are no impediments in the way of where the structure will be
2. Construction engineers have to . construction information to the managers.
3. They have to calculate load and grade . .
4. Construction engineers have a lot of ... in their job.
5. Certain ... have to be completed to ensure that everything is conducted correctly.
6. They have to make all the calculations to . that the structure can withstand stress.
7. If there are any impediments in the way of where the structure will be built they must ... them.
8. Analyzing reports is a main part of their job

VIII. Scan the text and answer the questions:

1. Whom does construction industry provide jobs to?
2. Construction engineers follow the plans of architects, don't they?
3. How do construction engineers make sure the structure has been built correctly?
4. What is a main part of construction engineers' job description?
5. What do construction engineers have to use computer software for?

6. When do construction engineers have to conduct surveying the land?
7. What must construction engineers do with impediments that happen to be in the way of where the structure will be built?
8. Why do construction engineers have to test the soils and materials used?
9. What do construction engineers have to provide to the managers?

Практическое занятие №9.

Тема 9. Industrial construction /Промышленное строительство

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;
- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

Industrial construction

Industrial construction, though a relatively small part of the entire construction industry, is a very important component. Owners of these projects are usually large, for-profit, industrial corporations. These corporations can be found in such industries as medicine, petroleum, chemical, power generation, manufacturing, etc. Processes in these industries require highly specialized expertise in planning, design, and construction. As in building and heavy/ highway construction, this type of construction requires a team of individuals to ensure a successful project.

Design team

In the modern industrialized world, construction usually involves the translation of paper or computer based designs into reality. A formal design team may be assembled to plan the physical proceedings, and to integrate those proceedings with the other parts. The design usually consists of drawings and specifications, usually prepared by a design team including architects, interior designers, civil engineers, cost engineers (or quantity surveyors), mechanical engineers, electrical engineers, and structural engineers. The design team is most commonly employed by (i.e. in contract with) the property owner. Under this system, once the design is completed by the design team, a number of construction companies or construction management companies may then be

asked to make a bid for the work, either based directly on the design, or on the basis of drawings and a bill of quantities provided by a surveyor. Following evaluation of bids, the owner will typically award a contract to the lowest responsible bidder.

Find English equivalents in the text:

промышленное строительство -
относительно малая часть -
электроснабжение, энергетика -
коллектив собственников -
проектная группа -
претворение в жизнь -
чертежи и проектные задания -
специалист по дизайну интерьеров -
инженер-сметчик -
сметный расчет -
заключить подрядный договор -
выгодный подрядчик -
инженер-проектировщик -
гражданский инженер-строитель -
заказчик-застройщик -
определение количества заявок -
компьютерный проект -
специальные знания -
современный индустриальный мир -
коммерческая корпорация -
заявка на работу -

Give Russian equivalents to the following:

1. petroleum -
2. to manufacture -
3. to involve -
4. paper based -
5. to assemble -
6. a physical proceeding -
7. to integrate -
8. commonly -
9. to employ -
10. a construction company -
11. to base -
12. a quantity surveyor -
13. to provide -
14. typically -
15. a bidder -

Translate the text and say whether these statements are true or false:

1. Industrial construction is a large part of the entire construction industry.
2. Large, for-profit, industrial corporations own industrial construction projects.
3. Processes in medicine, petroleum, chemical, manufacturing and other industries require common expertise in planning and construction.
4. Industrial construction requires a team of civil engineers to ensure a successful project.
5. Construction usually involves the translation of computer based designs into paper.
6. The physical proceedings are planned by a formal team of individuals.
7. A design team usually prepares a successful project.
8. A design team usually consists of individuals and owners.
9. The design team is usually in contact with the property owner.

10. After the design is completed construction companies can make a bid for the work.

11. The owner usually awards a contract to the most famous bidder.

Choose the right variant:

As in building and heavy\highway construction, this type of construction .

а) Как и в жилищном строительстве и строительстве крупных инженерных сооружений или дорожном строительстве этот тип строительства .

б) Так как в жилищном строительстве и в строительстве крупных инженерных сооружений или дорожном строительстве этот тип строительства .

в) И в жилищном строительстве и в строительстве крупных инженерных сооружений в этом типе строительства .

... construction usually involves the translation of paper or computer based design into reality.

а) ... строительство обычно вовлекает перевод реальных проектов, выполненных на бумаге в компьютерные.

б) ... строительство обычно предполагает претворение в жизнь как бумажных, так и выполненных на компьютере проектов.

в) . строительство обычно предполагает перевод реальных проектов как на бумагу, так и в компьютерный вариант.

... once the design is completed by the design team ...

а) . однажды, когда проект завершен проектной группой .

б) . так как проект завершается проектная группа .

в) . когда проектная группа завершает проект .

Following evaluation of bids, the owner will typically award a contract .

а) Следуя оценке тендеров, собственник обычно заключает договор ...

б) Вследствие оценки заявок, собственник обычно заключает договор ...

в) После оценки заявок, собственник обычно заключает подрядный договор .

Continue the sentence:

Owners of industrial construction projects are usually ...

. large construction companies.

. large construction management companies.

... large industrial corporations.

Industrial construction requires a team of individuals .

. to translate paper or computer based designs into reality.

... to integrate physical proceedings with the other parts.

... to ensure a successful project.

A formal design team may be assembled ...

. to award a contract to the lowest responsible bidder.

... to ensure a successful project.

... to prepare drawings and specifications.

After the design is completed a number of construction companies or construction management companies may be asked .

. to plan the physical proceedings.

... to ensure a successful project.

. to make a bid for the work.

After evaluation of bids the owner usually awards a contract .

. to the construction company.

. to the large, for-profit industrial corporation.

. to the lowest responsible bidder.

VII. a) Complete the table:

Noun	Verb	Adjective
-	succeed	-
form	-	-
-	-	proceeded

-	prepare	-
provision	-	-
-	-	based
-	respond	-

Choose the word from the table to complete the sentence:

1. A ... design team usually prepares drawings and specifications.
2. The design usually consists of drawings and specifications, usually ... by a design team.
3. Industrial construction requires a team of individuals to ensure ... project.
4. A formal design team may be assembled to plan the physical . . .
5. Construction usually involves the translation of paper or computer . designs into reality.
6. A surveyor is a person who usually . a bill of quantities.
7. The owner usually awards a contract to the lowest . bidder.

VIII. Scan the text and answer the questions:

1. Industrial construction is a relatively small part of the entire construction, isn't it?
2. Who are the owners of industrial construction projects?
3. Where can these corporations be found?
4. What kind of expertise do processes in these industries require?
5. What does industrial construction require a team of individuals for?
6. What does construction usually involve in the modern industrialized world?
7. What may a formal design team be assembled for?
8. Who usually prepares drawings and specifications?
9. Whom does a design team include?
10. Who commonly employs the design team?
11. When may a number of construction companies or construction management companies be asked to make a bid for a work?
12. Who provides a bill of quantities?
13. Whom does the owner typically award a contract to?

Практическое занятие №10.

Тема 10. Building construction /Строительство зданий.

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;

- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

Building construction

Building construction is the process of adding structure to real property. The vast majority of building construction projects are small renovations, such as addition of a room, or renovation of a bathroom. Often, the owner of the property acts as laborer, paymaster, and design team for the entire project. However, all building construction projects include some elements in common - design, financial, and legal considerations. Many projects of varying sizes reach undesirable end results, such as structural collapse, cost overruns; those with experience in the field make detailed plans and maintain careful oversight during the project to ensure a positive outcome.

For projects of large size and/or unusual type, the owner will likely establish a team of workers and advisors to create an overall plan. This ensures that the project will proceed in an orderly way to a desirable end. While no set list would establish what is needed or advisable for a particular project, frequently used advisors include mortgage bankers, accountants, lawyers, insurance brokers, architects, and engineers. While their roles overlap, each area of expertise addresses an element of what will be affected by the building construction project.

Find English equivalents in the text:

жилищное строительство -
объект недвижимости -
реконструкция ванной комнаты -
подсобный рабочий -
заказчик -
весь объект (строительства) -
правовые особенности -
обрушение сооружения -
перерасход финансовых средств -
четкий контроль -
разрабатывать генеральный план -
организованно (организованным порядком) -
определенный список -
страховой агент (брокер) -
ипотечный банкир (банковский работник) -
совпадать -
специальные знания -

Give Russian equivalents to the following:

a vast majority -
the owner of the property -
design team -
a varying size -
an undesirable end result -
detailed plans -
to maintain -
to ensure a positive outcome -
to establish a team of workers -
a particular project -
an accountant -

frequently -

Translate the text and say whether these statements are true or false:

1. Building construction concerns adding structure to real property.
2. A small renovation often includes addition of a room, renovation of a bathroom and things like that.
3. The construction engineer usually acts as laborer, paymaster, and design team for the entire project.
4. Many projects of varying sizes reach desirable end results.
5. Those with experience in the field make it possible to ensure a positive outcome.
6. For projects of large size the owner creates an overall plan himself.
7. A group of advisors establish a set list of what is needed for a particular project.

Choose the right variant:

Many projects of varying sizes reach desirable end results ...

- а) Многие проекты различных размеров достигают нежелательного результата .
б) Многие объекты различных размеров приводят к нежелательным конечным результатам .
в) Многие объекты больших размеров достигают результатов, которые являются нежелательными .

This ensures that the project will proceed .

- а) Это обеспечивает сохранность проекту и будет продолжать ...
б) Это гарантирует проекту продолжение .
в) Это гарантирует, что проект будет продвигаться .

While no set list would establish what is needed ...

- а) Так как установленный перечень всего необходимого не утвержден .
б) Пока установленный список всего того, что необходимо не будет утвержден .
в) Так как ни один список необходимых вещей не установлен ...

... frequently used advisors include mortgage bankers, accountants, ...

- а) . зачастую пользовались консультантами, включая ипотечных банкиров, бухгалтеров, .
б) . часто использованные консультанты включают ипотечных банковских работников, бухгалтеров, .
в) . в число часто используемых консультантов входят ипотечные банковские работники, бухгалтера, .

... each area of expertise addresses an element of what will be affected .

- а) ... каждая область специальных знаний направлена на элемент, который будет оказывать влияние на .
б) . каждая сфера знаний адресуется отдельному элементу, который подвержен влиянию .
в) . каждая область специальных знаний и опыта связана с отдельным элементом, на который будет оказывать влияние .

Continue the sentence:

The owner of the property often acts as ...

- a construction engineer.
a manager.
a laborer.

This ensures that the project will proceed in an orderly way to .
an undesirable end result.
a desirable end.
a negative outcome.

All building construction projects include ...

- small renovations.
financial and legal considerations.
cost overruns.

A team of workers and advisors is established to deal with ...
addition of a room.

projects of large size and unusual type.

renovation of a bathroom.

Mortgage bankers, accountants, lawyers, insurance brokers, architects and engineers make up .
a team of workers for a particular project.

a team of design workers for a particular projects.

a team of frequently used advisors for a particular projects.

VII. Complete the table:

Noun	Verb	Adjective
-	major	-
-	-	renovated
-	finance	-
desire	-	-
-	detail	-
-	-	addressed
advice	-	-

Choose the word from the table to complete the sentence:

1. All building construction projects include design, ... and legal considerations.
2. The vast . of building construction projects are small renovations.
3. A team of workers and advisors create an overall plan to ensure that the project will proceed in an orderly way to a . end.
4. Those with experience in the field make . plans and maintain careful oversight during the project.
5. A set list of what is needed or ... for a particular project should be established.
6. Each area of expertise ... an element of what will be affected by the building construction project.
7. A building construction project sometimes includes addition of a room or ... of a bathroom.

VIII. Scan the text and answer the questions:

1. What does building construction deal with?
2. What does a small renovation usually include?
3. How does the owner of the property usually act?
4. What do all building construction projects include?
5. What do many projects of varying sizes sometimes reach?
6. Why should careful oversight be maintained during the project?
7. What will the owner likely establish a team of workers and advisors for?
8. What ensures that the project will proceed in an orderly way to a desirable end?
9. Whom do frequently used advisors include?
10. Do their roles overlap?
11. What does each area of expertise address?

Практическое занятие №11.

Тема 11. Residential construction /Жилищное строительство

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;

- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;
- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;
- необходимыми навыками профессионально-делового общения на иностранном языке.

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

Residential construction

More and more families are looking into building their own homes, or contracting to have them built. Construction practices, technologies, and resources conform to state and local building codes. In most Australian states, a home owners warranty must be obtained prior to residential construction of dwellings less than three stories high.

Heavy/Highway construction

Heavy/Highway construction is the process of adding infrastructure to our built environment. Owners of these projects are usually government agencies, either at the national or local level. As in building construction, heavy/highway construction has design, financial, and legal considerations, however these projects are not usually undertaken for-profit, but to service the public interest. However, heavy/highway construction projects are also undertaken by large private corporations, including, among others, the golf courses, harbors, power companies, railroads, and mines, who undertake the construction of access roads, dams, railroads, general site grading, and massive earthwork projects. As in building construction, the owner will assemble a team to create an overall plan to ensure that the goals of the project are met.

Find English equivalents in the text:

- жилищное строительство -
- практика строительства -
- строительные нормы -
- строительство жилых домов -
- строительство крупных инженерных сооружений -
- дорожное строительство -
- застроенная окружающая среда -
- поле (площадка) для гольфа -
- энергетическая компания -
- подъездная дорога -
- организация рельефа -
- крупный земляной объект - собирать команду -

Give Russian equivalents to the following:

- to conform -
- home owners warranty -
- to obtain -
- to add infrastructure -
- a harbor -
- a government agency -
- a local level -

profit -
a public interest -
a mine -
to undertake the construction -
to create an overall plan -

Translate the text and say whether these statements are true or false:

1. More and more families want to build their own homes.
2. A home owners warranty must be obtained to construct a dwelling less than three stories high.
3. Heavy construction is the process of adding a structure to real property.
4. Only private agencies usually own the projects concerning the process of adding infrastructure to our built environment.
5. Heavy/highway construction projects are undertaken for profit.
6. Heavy construction projects concerning golf courses, harbors, power companies, rail roads are undertaken by government agencies.
7. An overall plan is created to ensure that the goals of the projects are met.

Choose the right variant:

More and more families are looking into building their own homes ...

- а) Большие семьи наблюдают за строительством своих домов ...
б) Больше и больше семей ищут построенные дома для жилья ...
в) Все больше и больше семей хотят построить свои собственные дома .
. a home owners warranty must be obtained .

а) ... поручительство владельцев дома должно быть получено ...

б) . владельцы домов гарантируют, что должно быть получено .

в) . гарантия для владельцев домов должна быть получена .

... the process of adding infrastructure to our built environment ...

а) ... процесс, добавленный к инфраструктуре нашей застроенной окружающей среды .

б) ... процесс добавления инфраструктуры к нашей застроенной окружающей среде .

в) . процесс, который добавляется к инфраструктуре нашей застроенной окружающей среды .
.

... to ensure that the goals of the project are met.

а) . гарантировать, что цели проекта будут соответствовать друг другу.

б) . гарантировать соответствие целей проекта.

в) ... гарантировать, что цели проекта будут достигнуты.

... are also undertaken by large private corporations, including, among others, the golf courses, .

а) . также предпринимаются большими частными корпорациями, включая, среди других, площадки для гольфа, .

б) . также принимаются большими частными компаниями, включая и другие, такие как площадки для гольфа, .

в) . также предпринятый большими частными корпорациями, в состав которых, среди других, входят площадки для гольфа .

VI. Continue the sentence:

A home owners warranty must be obtained .

... before residential construction of dwellings.

... due to residential construction of dwellings.

... after residential construction of dwellings starts.

A lot of families nowadays are looking into .

... building their own flats.

... contracting to have their own golf courses.

. contracting to have their own homes built.

Heavy construction is the process of adding ...

. structures to real property.

... a room or renovation of a bathroom.
 ... golf courses, harbors, power companies and things like that to our built environment.
 Heavy/highway construction projects are undertaken .
 . for profit.
 ... to service the public interest.
 ... to service the government interest.
 The owners ... to ensure that the goals of the project are met.
 ... himself creates an overall plan ...
 . assembles a team to create an overall plan .
 . undertakes all measures .

VII. a) Complete the table:

Noun	Verb	Adjective
-	build	-
-	-	contractual
-	reside	-
finance	-	-
-	-	interesting
-	environ	-
creation	-	-
-	-	assembled

Choose the word from the table to complete the sentence:

1. Heavy/highway construction deals with adding infrastructure to our built . .
2. Heavy/highway construction has design, ., and legal considerations.
3. Many families nowadays are . building their own homes.
4. A home owners warranty must be obtained prior to ... construction of dwellings.
5. Heavy/highway construction projects are undertaken to service the public .
6. A team of advisors ... an overall plan to ensure that the goals of the project are met.
7. Construction practices, technologies, and resources conform to state and local . codes.
8. The owner of the project will ... a team to create an overall plan.

VIII. Scan the text and answer the questions:

1. What are more and more families looking into?
2. When must a home owners warranty be obtained?
3. What does heavy/highway construction deal with?
4. Who is the owner of heavy/highway construction projects?
5. Are heavy/highway construction projects undertaken for profit?
6. What do heavy/highway construction projects include?
7. What does the owner of the project assemble a team of advisors for?
8. What do a team of advisors create an overall plan for?

РАЗДЕЛ. EDUCATION AND CAREER OF CONSTRUCTION ENGINEER / ОБРАЗОВАНИЕ И КАРЬЕРА ИНЖЕНЕРА-СТРОИТЕЛЯ.

Практическое занятие №12.

Тема 11. New projects: the architect-engineer-contractor team / Новый проект: Команда архитектор-инженер -подрядчик.

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой
Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;
- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;
- необходимыми навыками профессионально-делового общения на иностранном языке.

Актуальность темы: обусловлена необходимостью овладения УК-4

Теоретическая часть:

- | | |
|---|--|
| 1. team n –бригада, команда | |
| 2. to interrelate v -взаимодействовать | |
| 3. triple -тройной | |
| 4. triangle n -треугольник | |
| 5. objective, n = aim, n -цель | |
| 6. in spite of, prep –несмотря на | |
| 7. to accept v -принимать | |
| 8. particular adj -частный | |
| 9. discerning adj -проницательный | |
| 10. to exist v -существовать | |
| 11. mutual respect, n -взаимоуважение | |
| 12. outstanding success, n –выдающийся успех | |
| 13. to coordinate v -координировать | |
| 14. to achieve, v -достигать | |
| 15. magnitude n -важность | |
| 16. to cultivate v - культивировать, поощрять | |
| | 17. final decision, n - Окончательное решение |
| | 18. estimate n - смета |
| | 19. structural engineer, n - инженер-проектировщик |
| | 20. to be aware of, v - знать, сознавать |
| | 21. owner, n - владелец, собственник |
| | 22. to secure v - обеспечивать |
| | 23. to suggest v - предлагать |
| | 24. schedule n - график |
| | 25. target n - задача |

“New projects: the architect-engineer-contractor team”.

1 Nearly two thousand years ago the Roman architect Vitruvius listed three basic factors in architecture - convenience, strength and beauty.

These factors are actual today. They are always present and are always interrelated in the best structures.

2 The architect, the engineer and the contractor form parts of a triangle all of which are essential to the completion of a construction project. Together they are working towards the same objective - better construction, better materials, and better design.

In spite of the increased cost of today's buildings as compared with those of

10 years ago, no one would accept a new structure of the older type of design and construction.

One aim, one responsibility, one striking result. The activity of the engineer and the architect in design and construction is of particular interest.

Between competent and discerning practitioners of both professions there exists and should exist a mutual respect for their individual abilities.

In fact, no important building project has been an outstanding success without the respective training experience and skill of engineers and architects coordinated towards a common result.

3 The chief function of the architect is to solve a particular problem of construction in such a way as to achieve a structure or structures with proper and harmonious balance of utility, strength, beauty and economy. If the project is of any magnitude, the conception takes material form through the skill of the engineer.

In such project the engineer must depend on the planning and skill of the architect; the architect - on the construction skill of the engineer. Thus, engineers and architects can cultivate the mutual respect, which will develop the harmony and solidarity of basic professions. In most cases it is the architect who must make the final decisions based on the contractor's estimates of cost, his faith in the structural engineer and his willingness to take a chance with new construction methods. First, the structural engineer must become aware of new developments, must learn how to design the new structure, know the cost of construction and be aware of the esthetic problems of the architect. Then he must suggest structures to the architect talk with the contractor about them and find their advantages and disadvantages.

The following steps are usually taken in putting up a building. The owner, be it a corporation, bank or individual, feels the need for a new building and secures a site. These two fundamental decisions what is to build and where to build are made by the owner, sometimes with architectural or engineering advice.

Then the contractor plans the site layout, prepares the project program, schedules and targets.

The engineer in his turn controls the quality of his structure in two ways – by the specifications he writes into the contract and by the inspection he maintains during construction. These two factors have a significant effect on the productivity of the contractor's organization.

5 As a result of the combined efforts of the engineer, the architect and the contractor, new forms and new methods of construction are developed and three main aims - economic, esthetic and technical, single or in combination, are successfully realized in spectacular building by the architect, the engineer and the contractor, each of which has contributed to this development.

Вопросы и задания.

Exercise 1 Find the English equivalents to the following word combinations in the text.

Три основных фактора; образовывать части треугольника; завершение строительного объекта; одна цель; взаимоуважение; деятельность инженера и архитектора; прочность; красота и экономия; компетентный практик; материальная форма; мастерство инженера; новые формы; подрядчик; инженер проектировщик; знать, как проектировать; планировать расположение на площадке.

Exercise 2 Write in the number of the paragraph that deals with the following topics:

- архитектура - нелёгкое искусство
- деятельность инженера и архитектора
- стадии возведения здания
- появление новых форм и методов строительства

Exercise 3 Scanning means looking for special information in the text. Scan the text to find information on the following topics:

- the chief function of the architect
- the work of the structural engineer
- the result of the combined efforts of the team

- the formula of the success to be remembered.

Exercise 4. Choose the key sentence from each paragraph.

1. Vitruvius listed three basic factors in architecture - convenience, strength and beauty.
- 2.
- 3.
- 4.
- 5.

Exercise 5. Answer the following questions.

1. By what geometric figure can you express the interdependence in the work of competent practitioners?
a square – квадрат
a circle – круг
a triangle– треугольник
a rhomb - ромб
2. What is your opinion about new projects in Voronezh?
3. Enumerate some of the most interesting projects.
4. How do you appreciate the work of the architect, the engineer and the contractor?
5. What contribution are you going to make when you become a civil engineer?
6. Think of your own questions concerning new projects in Voronezh.
7. What are their advantages and disadvantages?

Практическое занятие №13

Тема 13. Construction engineers/ Инженеры-строители

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;
- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;
- необходимыми навыками профессионально-делового общения на иностранном языке.

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

Construction engineers

Construction engineers build structures that are used by people everyday so they have to be safe and be able to withstand the elements. To complete the job properly construction engineers have to have the knowledge of many different aspects. Those aspects include engineering, technology, design, math, construction, English, customer service, management, transportation, public safety, and computers. They use the engineering, technology, and math aspects to make sure they build the structure to the set standards. They use English, customer service, and management knowledge to deal with the people that could possibly buy the structure. They also use this knowledge to inform the management on how the project is coming along and if any changes are needed.

Most construction engineers have a love for math and science. In addition to these abilities there are many other skills needed to be a construction engineer. Critical thinking, listening, learning, problem solving, monitoring, and decision making are all very important in construction engineering. Construction engineers have to be able to think about all aspects of a problem and listen to other's ideas so that they can learn everything about a project before it begins. After they have begun a project they must solve the problems that they encounter using math and science. They also have to monitor the workers on the job site for safety and to make sure that the project is on time and done correctly. Whenever a problem occurs it is up to the construction engineer to make the decision on how to fix it.

Find the following words and word combinations in the text:

выдерживать элементы конструкции -
инженерное искусство -
обслуживание клиентов -
безопасность населения -
установленные нормы -
навыки управления -
идти, продвигаться -
критическое мышление -
решение проблем -
принятие решений -
проблемы, с которыми они сталкиваются -
следить за рабочими -
рабочее место -
зависит от инженера-строителя -

Give Russian equivalents of the following:

to be safe -
to complete the job -
different aspects -
to inform management -
to buy the structure -
a love for math and science -
many other skills -
all aspects of a problem -
to learn everything about the problem -
whenever a problem occurs -
how to fix it -

Translate the text and say whether these statements are true or false:

1. Structures that are used by people everyday have to be safe.
2. To complete the job properly construction engineers have to have the knowledge of engineering and management only.

3. They use customer service and management knowledge to make sure they build the structure to the set standards.
4. To be a construction engineer you must have a love for literature.
5. Construction engineers don't have to know anything about a project before it begins.
6. They have to use math and science after a project have been started.
7. The workers have to monitor the construction process on the job site.
8. The construction engineers have to make the decision on how to fix any problem.

Choose the right variant:

Construction engineers build structures that are used by people .

- а) Инженеры-строители возводят сооружения, чтобы люди могли использовать их .
- б) Инженеры-строители строят сооружения, которые люди используют .
- в) Инженеры-конструкторы строят конструкции, это используемые людьми .

To complete the job properly construction engineers have to have the knowledge of many different aspects.

- а) Для полного и правильного выполнения работы инженеры- строители должны иметь знания многих различных аспектов.
- б) Чтобы выполнить работу правильно, инженеры-строители должны иметь знания множества различных аспектов.
- в) Для правильного выполнения работы инженеры-строители должны ознакомиться с различными аспектами.

They use the engineering, .., to make sure they build the structure to the set standards.

- а) Они пользуются инженерным искусством, ..., и уверяют, что они строят в соответствии с установленными стандартами.
- б) Они используют инженерное искусство, .., чтобы убедить, что они строят в соответствии с установленными стандартами.
- в) Они используют навыки инженерного искусства, .., чтобы убедиться, что они строят сооружение в соответствии с установленными нормами.

. there are many other skills needed to be a construction engineer.

- а) . есть много других навыков необходимых для инженеров- строителей.
 - б) . есть множество других навыков, которые необходимы для того, чтобы инженерами-строителями.
 - в) ... есть еще много различных навыков, в которых нуждаются инженеры-строители.
- ... listen to other's ideas so that they can learn everything ...
- а) . слушать другие идеи так, чтобы они могли научить всему ...
 - б) .слушать мысли других потому, что они могут научить всему .
 - в) . слушать идеи других, для того чтобы узнать все .

Whenever a problem occurs it is up to the construction engineer ...

- а) Когда проблема случается, инженер-строитель ...
- б) Когда бы ни случалась проблема, она зависит от инженера- строителя ...
- в) Когда бы ни случилась проблема, только инженер-строитель .

Continue the sentence:

Construction engineers use math aspects ...

- to withstand the elements.
- to complete the job properly.
- to build the structure to the set standards.

Critical thinking, listening, learning, problem solving are needed .

- to use a computer properly.
- to be a construction engineer.

to monitor the workers on the job site.

Construction engineers can learn everything about a project before it begins ...

- using English and management knowledge.
- thinking about all aspects of a problem and listening to other's ideas.

solving the problems that they encounter.

Construction engineers have to have the knowledge of many different aspects .

to inform the management on how the project is coming along.

to deal with the people that could possibly buy the structure.

to complete the job properly.

VII. a) Complete the table:

Noun	Verb	Adjective
-	save	-
-	-	informed
make	-	-
-	-	used
-	manage	-
building	-	-
-	-	monitored

Choose the word from the table to complete the sentence:

1. Construction engineers use math aspects to make sure they ... the structure to the set standards.
2. Structures that are used by people everyday have to be ... and be able to withstand the elements.
3. They use management knowledge . the management on how the project is coming along.
4. Construction engineers have to have the knowledge of engineering, technology, design, .. public safety and things like that to complete the job properly.
5. Construction engineers have to ... sure that the project is on time and done correctly.
6. They also have to . the workers on the job site for safety.
7. To complete the job properly construction engineers ... the knowledge of many different aspects.

VIII. Scan the text and answer the questions:

1. Why do structures that construction engineers build have to be safe?
2. What do construction engineers have to have the knowledge of many different aspects for?
3. What knowledge do construction engineers have to have to make sure they build the structure to the set standards?
4. What knowledge do they use to deal with the people that could possibly buy the structure?
5. Who informs the management on how the project is coming along?
6. How do construction engineers can learn everything about a project before it begins?
7. What must construction engineers solve after they have begun a project?
8. Why do construction engineers have to monitor the workers on the job site?
9. Does the management or a construction engineer make the decision on how to fix any problem whenever it occurs?

Практическое занятие №14.

Тема 14. Construction engineers(2) /Инженеры-строители (2).

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;

- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;
- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;
- необходимыми навыками профессионально-делового общения на иностранном языке.

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

Construction engineers

Construction engineers have many different kinds of abilities they use to do their job. Construction engineers use these abilities to communicate with other workers and to solve problems. They also haveto use their abilities to know what kinds of materials to order and how to get those materials while staying under the budget.

Construction engineers have many activities that they have to do everyday. Those activities include drafting, decision making, computer interaction, communication, documenting, creative thinking, organizing, information collecting, estimating, and analyzing. Construction engineers use drafting to design structures and to show others how to build them. They have to analyze information and make the best decision and solve problems. Computers are an important tool used by construction engineers. They use them to write programs and solve equations. Communication is used everyday to interact with coworkers and supervisors. They have to communicate in person, by telephone, and through e-mail. Documentation is used to record important information that needs to be passed on to management. Most documenting is done in electronic form. Creative thinking is used to come up with new ideas and solve problems. Construction engineers have to be organized to accomplish goals and prioritize jobs. They have to gather information on the task at hand before they can start a project. This will help ensure that the job is completed correctly. In order to keep a project under budget, construction engineers have to estimate costs of materials and workers. Finally, they have to analyze data to find answers to problems they are having on the job site.

Find English equivalents in the text:

- способность -
- составление плана -
- принятие решения -
- оформление документов -
- составление сметы -
- важный инструмент -
- устанавливать очередность в выполнении работ -
- выполнять задачи -

строительная площадка -

Give Russian equivalents to the following:

- to stay under the budget -
- computer interaction -
- creative thinking -
- information collecting -
- to design structures -
- to interact with coworkers -

- to communicate in person -
- to be passed on to management -
- to gather information on task -
- to estimate costs of materials -

Translate the text and say whether these statements are true or false:

Construction engineers use different kinds of abilities to communicate with each other.

Construction engineers have a lot to do every day.

The activities of the construction engineers include creative thinking and organizing parties.

Construction engineers don't use computers in their work.

Construction engineers have to communicate with coworkers by telephone only.

Creative thinking is used to solve problems.

Construction engineers have to analyze data to ask the workers questions.

Choose the right variant:

Construction engineers have many different kinds of abilities they use to do their job.

- а) Инженеры-строители должны использовать много разных возможностей для выполнения своей работы.
- б) Инженеры-строители имеют много различных возможностей для выполнения своей работы.
- в) Инженеры-строители имеют много различных способностей, которые они используют для выполнения своей работы.

They have to communicate in person, by telephone and through e-mail.

- а) Они должны связываться с людьми по телефону и по электронной почте.
- б) Они имеют связь с людьми по телефону и по электронной почте.
- в) Они должны связываться с людьми лично, по телефону и по электронной почте.

Creative thinking is used to come up with new ideas and solve problems.

- а) Креативное мышление используется в новых идеях и решении проблем.
- б) Креативное мышление используется для того, чтобы соответствовать новым идеям и для решения проблем.
- в) Креативное мышление использовалось в новых идеях и решении проблем.

Continue the sentence:

Construction engineers have many abilities ...

to do every day.

they use to do their job.

to design structures.

Construction engineers use documentation .

to solve problems.

to analyze information.

to record information and to pass it onto management.

Construction engineers use estimating ...

to make the best decision and solve problems.

to keep a project under budget.

to show others how to build structures.

a) Complete the table:

Noun	Verb	Adjective
construction	-	-
-	communicate	-
-	-	decisive
interaction	-	-
-	create	-
organization	-	-
-	-	informed

Choose the word from the table to complete the sentence:

1. Construction engineers have to analyze information and make the best . and solve problems.
2. They have to gather . on the task at hand before they can start a project.
3. Communication is used every day . with coworkers and supervisors.
4. . thinking is used to come up with new ideas and solve problems.
5. Construction engineers have to be . to accomplish goals and prioritize jobs.
6. Construction engineers use many kinds of abilities ... with other workers.
7. Construction engineers use drafting to design structures and to show others how ... them.

Scan the text and answer the questions:

1. What kind of activities do construction engineers have to do every day?
2. What do construction engineers use their abilities for?
3. What do construction engineers use drafting for?
4. How do they manage to make the best decision and solve problems?
5. What do construction engineers use for writing programs and solving equations?
6. What is communication used for?
7. How do construction engineers pass important information onto management?
8. What is creative thinking used for?
9. Why do construction engineers have to be organized?
10. What do construction engineers have to do in order to keep a project under budget?
11. How do construction engineers find answers to problems they are having on the job site?

Практическое занятие №15.

Тема 16. Education and Licensure of civil engineers / Образование и лицензирование инженера-строителя.

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;
- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;
- необходимыми навыками профессионально-делового общения на иностранном языке.

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

Education and Licensure

Prior to becoming a practicing engineer, civil engineers generally complete tertiary (college or higher) educational requirements, followed by several years of practical experience. Each country, state, or province individually regulates civil engineering practice.

In the U.S., one must become a licensed Professional Engineer to do any civil engineering work affecting the public or to legally represent oneself as a civil engineer. Licensure requirements vary slightly by state, but in all cases entail passing two licensure exams, the Fundamentals of Engineering exam and the Principles and Practice exam, and completing a state-mandated number of years of work under the supervision of a licensed Professional Engineer. In addition, an educational requirement must often be met. All states accept a four year Bachelor of Science (BS) or Bachelor of Engineering (BEng) degree in Civil Engineering. The acceptability of degrees in other fields varies by state; some states allow a person to substitute additional years of supervised work experience for the degree requirement. Although the American Society of Civil Engineers encourages states to raise the educational requirement to a graduate degree, advanced degrees are currently optional for civil engineers in the United States. Graduate study may lead either to a Master of Engineering, which is a Professional Master's degree, or to a Master of Science degree followed by a PhD in civil engineering or a sub-discipline.

Find the following words and word combinations in the text:

практикующий инженер -
за которыми следуют -
практический опыт -
работа, связанная с гражданским строительством -
затрагивать интересы общества -
представлять себя -
слегка отличаться -
лицензированный профессиональный инженер -
бакалавр технических наук -
ученая степень -
требование наличия ученой степени -
аспирантура -
магистр технических наук -
доктор философии в гражданском строительстве -

Give Russian equivalents of the following:

prior to becoming -
tertiary educational requirements -
licensure requirements -
a state-mandated number of years -
under the supervision -
varies by state -
work experience -
to be optional -
currently -
a requirement must be met -
the acceptability of degrees -
civil engineering practice -

Translate the text and say whether these statements are true or false:

Prior to becoming a practicing engineer, civil engineers have several years of practical experience. A licensed Professional Engineer in the USA can do any civil engineering work affecting the public.

Licensure requirements vary greatly by state and entail passing two or three licensure exams.

In the US, to become a licensed Professional Engineer one should complete a state-mandated number of years of work under the supervision of a licensed Professional Engineer.

In Civil Engineering all states accept a Bachelor of Engineering degree only.

In the USA one cannot substitute additional years of supervised work experience for the degree requirement.

Nowadays advanced degrees are optional for civil engineers in the United States.

Choose the right variant:

. civil engineers generally complete tertiary educational requirements, followed by several years of practical experience.

а) . инженеры-строители обычно получают вузовское образование после нескольких лет практического опыта работы.

б) . инженеры-строители, как правило, получают вузовское образование, после чего следуют несколько лет практического опыта работы.

в) . инженеры-строители обычно получают высшее образование, которое соответствует нескольким годам практического опыта работы.

... one must become a licensed Professional Engineer to do any civil engineering work affecting the public .

а) ... кто-то должен стать лицензированным профессиональным инженером, чтобы выполнять любую работу по гражданскому строительству, связанную с обществом .

б) . один должен стать лицензированным профессиональным инженером, чтобы выполнять какую-нибудь работу по гражданскому строительству, влияющую на общество .

в) . нужно стать лицензированным профессиональным инженером, чтобы выполнять любую работу по гражданскому строительству, затрагивающую интересы общества .

. an educational requirement must often be met.

а) . образовательное требование должно зачастую соответствовать.

б) . с образовательным требованием часто приходится встречаться.

в) . образовательное требование зачастую должно быть удовлетворено.

. some states allow a person to substitute additional years of supervised work experience for the degree requirement.

а) . некоторые штаты позволяют человеку заменить дополнительные годы практического опыта работы ученой степенью.

б) ... в некоторых штатах разрешается замещать требование ученой степени дополнительными годами практического опыта работы.

в) . в некоторых штатах разрешается замещение дополнительных лет практического опыта работы требованием ученой степени.

Continue the sentence:

To become a practicing engineer, civil engineers generally complete ...
secondary educational requirements.

higher educational requirements.

basic educational requirements.

To do any civil engineering work one must .

become a licensed Professional Engineer.

get a Bachelor of Engineering degree.

complete a tertiary educational requirements.

Licensure requirements entail ...

passing the Fundamentals of Engineering exam and the Principles and Practice exam.

completing a state-mandated number of years of work.

passing the Fundamentals of Engineering exam and the Principles and Practice exam and completing a state-mandated number of years of work.

Some states allow a person to substitute ...

secondary educational requirements for the degree requirement.

the degree requirement for additional years of supervised work experience.

additional years of supervised work experience for the degree requirement.

VII. a) Complete the table:

Noun	Verb	Adjective
		practicing
	regulate	
		licensed
education		
		supervised
		required
addition		

Choose the word from the table to complete the sentence:

1. Licensure ... entail passing two licensure exams.
2. A licensed Professional Engineer . the work of a practicing engineer during several years of his practical experience.
3. To become a . engineer, civil engineers generally complete higher educational requirements.
4. An . requirement must often be met.
5. Some states allow a person to substitute . years of supervised work experience for the degree requirement.
6. To do any civil engineering work in the US you must become a . Professional Engineer.
7. Each country, state, or province individually . civil engineering practice.
8. All states ... a four year Bachelor of Science or Bachelor of Engineering Degree.

VIII. Scan the text and answer the questions:

1. What do civil engineers complete to become a practicing engineer?
2. Who regulates civil engineering practice?
3. Who can do any civil engineering work in the USA?
4. What do licensure requirements entail?
5. Who supervises the work of a practicing engineer during several years of his practical experience?
6. What degrees in Civil Engineering are accepted in the United States?
7. Is the situation with the acceptability of degrees in other fields the same in all states?
8. Are advanced degrees obligatory for civil engineers in the United States nowadays?
9. What degree follows after a Master of Engineering degree in the USA?

Практическое занятие №16.

Тема 16. Career/ Карьера

Цель: Формирование коммуникативных компетенций, овладение лексикой и грамматикой

Знать:

- основные способы работы над языковым и речевым материалом;
- лексико-грамматический минимум в объеме, необходимом для работы с иноязычными текстами в процессе профессиональной деятельности;
- лексику профессиональной направленности;
- нормы употребления лексики английского языка в профессиональной сфере

Уметь:

- осуществлять профессиональную коммуникацию в устной и письменной формах на английском языке;
- читать и переводить специальную литературу для пополнения профессиональных знаний;
- изъясняться на бытовые и профессиональные темы; выступать публично (с предварительной подготовкой) с сообщениями и докладами;
- аннотировать, реферировать, переводить литературу по специальности на иностранном языке

Владеть:

- приемами самостоятельной работы с языковым материалом (лексикой, грамматикой, фонетикой) с использованием справочной и учебной литературы;
- способами пополнения профессиональных знаний на основе использования оригинальных источников на иностранном языке, из разных областей общей и профессиональной культуры;
- необходимыми навыками профессионально-делового общения на иностранном языке.

Актуальность темы: обусловлена необходимостью овладения УК-4.

Теоретическая часть:

Careers

In the United States, there is no one typical career path for Civil Engineers. Most engineering graduates start with jobs of low responsibility, and as they prove their competence, are given more and more responsible tasks, but within each subfield of civil engineering, and even within different segments of the market within each branch, the details of a career path can vary. In some fields and in some firms, entry-level engineers are put to work primarily monitoring construction in the field, serving as the “eyes and ears” of more senior design engineers; while in other areas, entry-level engineers end up performing the more routine tasks of analysis or design. More senior engineers can move into doing more complex analysis or design work, or management of more complex design projects, or management of other engineers, or into specialized consulting, including forensic engineering.

Salaries for Civil Engineers in the United States have typically been lower than those for other fields of engineering, but entry-level salaries are higher than those in most non-engineering fields outside IT.

Find the following words and word combinations in the text:

- продвижение по службе -
- выпускники-инженеры -
- подтверждать профессиональное соответствие -
- сегмент рынка -
- инженеры-стажеры -
- более сложные конструкторские проекты -
- стандартные задачи -
- руководство другими инженерами -
- криминалистика -
- заработная плата на начальном уровне -
- более ответственные задания -

Give Russian equivalents of the following:

- low responsibility -
- subfield of civil engineering -
- can vary -
- to monitor construction in the field -
- to serve as the “eyes and ears” -
- senior design engineers -
- complex analysis or design work -

Translate the text and say whether these statements are true or false:

1. Civil Engineers in the United States have one typical career path.
2. Nowadays most engineering graduates don't have to prove their competence to be given more responsible tasks.
3. Within each subfield of civil engineering the details of a career path are the same.
4. In all fields and in all firms entry-level engineers start their work with monitoring construction in the field.

5. Civil engineers in the United States have salaries as those in other fields of engineering.

Choose the right variant:

. as they prove their competence, are given more and more responsible tasks .

а) . так как они доказывают свою компетенцию, они дают больше и больше ответственных заданий ...

б) ... по мере того как они подтверждают свое профессиональное соответствие им дают более и более ответственные задания .

в) . так как им приходится подтверждать свою профессиональную пригодность им дают более и более ответственные задания .

. within each subfield of civil engineering, and even within different segments of the market ...

а) . в соответствии с каждой подобластью гражданского строительства и даже в соответствии с различными секторами рынка .

б) . с каждой подобластью гражданского строительства и даже с разными сегментами рынка

.

в) . в каждой подобласти гражданского строительства и даже в различных сегментах рынка

.

. in some firms entry-level engineers are put to work primarily .

а) в некоторых фирмах прием на работу инженеров состоит в первую очередь .

б) . в некоторых компаниях инженеры-стажеры вынуждены работать в первую очередь .

в) . в некоторых компаниях инженеры-стажеры начинают свою работу с .

. entry-level engineers end up performing the more routine tasks .

а) . инженеры-стажеры заканчивают выполнять более стандартные задания .

б) . инженеры-стажеры приступают к выполнению более стандартных заданий .

в) . инженеры-стажеры, наконец, начинают выполнять более стандартные задания.

More senior engineers can move into doing more complex .

а) Больше старших инженеров могут приступить к выполнению большего количества сложных .

б) Более старшие инженеры могут сдвинуть с места выполнение более трудных .

в) Старшие инженеры могут перейти к выполнению более сложных .

Continue the sentence:

Most engineering graduates start with .

more responsible tasks.

more routine tasks of analysis or design.

jobs of low responsibility.

Salaries of civil engineers in the United States are ...

higher than those in most non-engineering fields.

the same as in those of other fields of engineering.

lower than those of other fields of engineering.

In some firms entry-level engineers start their work with ...

monitoring construction in the field.

doing complex analysis and design work.

management of complex design projects.

VII. a) Complete the table:

Noun	Verb	Adjective
	manage	
		responsible
	vary	
monitor		
	specialize	
-	-	performed

Choose the word from the table to complete the sentence:

1. Nowadays most engineering graduates have to prove their competence to receive more ... tasks.

2. In the United States the career path for civil engineers in different subfields of civil engineering can ...
3. At the beginning of the career path entry-level engineers have to ... construction in the field.
4. More senior engineers ... more complex design projects.
5. In some fields entry-level engineers start their work monitoring construction in the field, while in other areas they . the more routine tasks of design.
6. While entry level engineers start their work monitoring construction in the field, more senior engineers can move into management of other engineers or into ... consulting.

VIII. Scan the text and answer the questions:

1. Is there only one typical career path for civil engineers in the United States?
2. How do most engineering graduates start their career path?
3. What do entry-level engineers have to do in some engineering firms?
4. What are more senior engineers meantime busy with?
5. How can salaries for Civil Engineers be compared with those for other fields of engineering?

Рекомендуемая литература.

Перечень основной литературы

1. English for building engineers : учеб. пособие / А.В. Колистратова. – Братск : ГОУ ВПО «БрГУ», 2011. – 92 с.
2. Данчевская, О.Е. English for Cross-Cultural and Professional Communication=Английский язык для межкультурного и профессионального общения : учебное пособие / О.Е. Данчевская, А.В. Малёв. - 6-е изд., стер. - Москва : Флинта, 2017. - 192 с.
3. Английский язык для архитектора и градостроителя: учебное пособие по английскому языку/ Л.А.Зарицкая; Оренбургский гос. ун-т. – Оренбург: ОГУ, 2013. – 116 с.

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1. Беляева И.В. Иностранный язык в сфере профессиональной коммуникации. Комплексные учебные задания [Электронный ресурс]: учебное пособие/ И.В. Беляева, Е.Ю. Нестеренко, Т.И. Сорогина— Электрон. текстовые данные.— Екатеринбург: Уральский федеральный университет, 2015.— 132 с.— Режим доступа: <http://www.iprbookshop.ru/65930.html>.— ЭБС «IPRbooks»
2. Меркулова Н.В. Английский язык в сфере управления / English for Management [Электронный ресурс]: учебное пособие/ Н.В. Меркулова— Электрон. текстовые данные.— Воронеж: Воронежский государственный архитектурно-строительный университет, ЭБС АСВ, 2016.— 124 с.— Режим доступа: <http://www.iprbookshop.ru/59141.html>.— ЭБС «IPRbooks»
3. Мусихина О.Н., Гисина О.Ф., Яськова В.Л. Английский язык для строителей. Практикум / Серия«Высшее профессиональное образование».—Ростов н/Д:Феникс, 2004. — 352 с.

Перечень ресурсов информационно-телекоммуникационной сети «Интернет», необходимых для освоения дисциплины

- <http://www.biblioclub.ru>
- <http://www.iprbookshop.ru>
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