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MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
National Aviation University
**Educational and Research Humanities Institute**
Foreign Languages and Applied Linguistics Department

APPROVED
Acting Rector

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"___" _____ 2017

Quality Management System

# SYLLABUS

**on**

**"Foreign Language"**

Field of study: 19 "Architecture and Construction"
Speciality: 192 "Building and Civil Engineering"
Specialization: "Industrial and Civil Engineering"

Year of Study – 1st Semester – 1st, 2nd

Classroom Sessions – 68 Graded Test – 1st semester
Self-study – 52 Examination – 2nd semester
Total (hours/ ECTS credits) – 120/4

Index CB-5-192/16-1.4

**QMS NAU S 12.01.04–01-2017**

The Syllabus on "Foreign Language" is based on the educational and professional program and Bachelor Curriculum № СВ-5-192/16 for Speciality 192 "Building and Civil Engineering" and Specialization "Industrial and Civil Engineering" and correspondent normative documents.

Developed by
Associate Professor
of the Department of Foreign Languages
and Applied Linguistics _____ L. Konoplianyk

Discussed and approved by the Department of Foreign Languages and Applied Linguistics, Minutes № ____ of "____" _____ 2017.

Head of the Department _____ O. Shostak

Discussed and approved by the Graduate Department for the Speciality 192 "Building and Civil Engineering" and Specialization "Industrial and Civil Engineering" – Department for Computer Technologies of Construction, Minutes № ___ of "___"_____2017.

Head of the Department _____ O. Lapenko

Discussed and approved by the Scientific-Methodological-Editorial Board of the Educational and Research Humanities Institute, Minutes № ___ of "___"_____2017.

Head of SMEB _____ S. Yahodzinskyi

"Agreed"
Director of ER HI

_____ A. Gudmanian
"____" _____ 2017.

Director of the Center
of Advanced Technologies

_____ V. Kazak
"_____" _____ 2017.

Document level – 3b
The planned term between the revisions – 1 year
**Master copy**

# 1. EXPLANATORY NOTES

The Syllabus on the subject "Foreign Language" is developed on the basis of "Methodical instructions for development and preparation of a syllabus and a course training program of subjects" adopted on 16.06.2015 by №37/order.

Teaching English is of great importance in the higher educational system of Ukraine. Being directed on communication and linked with social and special subjects the subject "Foreign Language" makes significant contribution into the education of young people.

Learning profession-oriented foreign language is an integral part of students' preparing for the transition from learning a foreign language as a subject to its practical use for the professional purpose. Practical skills in the foreign language enable students to be aware of world standards and literature in order to make the independent professional decision.

The objective of teaching "Foreign Language" is the formation of students' professional language competence that will facilitate their effective functioning in the cultural diversity of educational and professional environment. The main purpose of studying "Foreign Language" by the students of the speciality 192 "Building and Civil Engineering" is to obtain practical skills in the foreign language. These skills must be acquired on the basis of learning profession-oriented topics defined by this syllabus.

The tasks of mastering the subject are the following:

– to learn professional terminology and everyday English words;

– to be able to read and make oral/written translation of authentic scientific and technical texts on specialty;

– to understand recorded and live foreign speech;

– to be able to communicate within the learnt topic.

After studying the subject "Foreign Language" the student has to:

**Know:**

– basic professional terminology;

– main grammar and lexical features of translation of technical literature;

– main rules of handling scientific and technical literature;

– word-building morphemes and models, particularly in the area of terminology building;

– main grammar structures, correlation of their forms and meanings;

– linguistic clichés, typical for scientific and technical literature.

**Be able:**

– to read and comprehend the authentic literature, including literature on the specialty, to obtain the necessary information;

– to participate in discussion;

– to understand oral speech on the basis of the learnt material;

– to make reports on professional and social and political topics and the topics defined by this syllabus;

– to render information obtained while reading both in foreign and native languages (in oral and written forms);

– to analyze grammar structures and correlate their forms and their meanings while reading and translating texts.

The teaching material of the subject is structured in a modular manner and consists of two training modules, including:

– training **module №1 "Building Materials"**

– training **module №2 "Basic Structural Elements of Buildings"**, which are logically complete, relatively independent, integral part of the curriculum, learning of which provides for the module test and the analysis of its implementation.

The subject "Foreign Language" is based on the knowledge of the following subjects: "Ukrainian Language", "Higher Mathematics", "Physics", "Chemistry", "Environmental Science", "Theoretical Mechanics", "Engineering Graphics", "Informatics (General Course)" and others.

## 2. SUBJECT CONTENT

### 2.1. Module №1 "Building Materials".

**Topic 2.1.1. Stone as a building material.**

Properties of stone, advantages and disadvantages of stone as a building material. History of stone application in construction. Types of simple sentences.

**Topic 2.1.2. Rocks.**

Classification of rocks. Volcanic, sedimentary and metamorphic rocks and their properties. Types of questions.

**Topic 2.1.3. Well-known stone buildings and constructions.**

World-famous stone constructions: Taj Mahal mausoleum in India, Colosseum in Rome, the Landwasser viaduct in Switzerland. Present Simple.

**Topic 2.1.4. Egypt's ancient pyramids.**

The Pyramid of Khufu, the Pyramid of Khafre, the Pyramid of Menkaure. The history of the construction of the pyramids and the present time. Present Continuous.

**Topic 2.1.5. Application of stone in the building construction.**

The concept of brick, properties of brick. The advantages and disadvantages of brick as a building material. Past Simple.

**Topic 2.1.6. Types of bricks.**

Types and forms of bricks (building bricks, facing bricks, engineering bricks). Types of brickwork bonds. Past Continuous.

**Topic 2.1.7. Cement.**

Properties of cement. Stages of cement production. The origin of cement, its types. Portland cement. Future Simple.

**Topic 2.1.8. Concrete.**

Properties of concrete and its composition. Types of aggregates. Reinforced concrete. Use of concrete and reinforced concrete in modern construction. Future Continuous.

**Topic 2.1.9. Wood and timber.**

The structure of wood, main types, properties of wood, advantages and disadvantages of wood in comparison with other building materials. Present Perfect.

**Topic 2.1.10. Wooden materials and products.**

Chipboards, fibreboards, cement boards, plywood. Present Perfect Continuous.

**Topic 2.1.11. Timber in the building construction.**

Application of wood and timber in the building construction. The history of the use of wood as a building material in the USA.

**Topic 2.1.12. Wooden buildings.**

Timber-framed constructions. Disadvantages of timber frames. Log houses (houses of logs). Past Perfect.

**Topic 2.1.13. Glass.**

Use of glass in modern building construction. Properties of glass, advantages and disadvantages. Glass facades. Past Perfect Continuous.

**Topic 2.1.14. Metals.**

Application of metals in building construction. Aluminum and its alloys, cast iron. Use of steel, iron and reinforced concrete; metal profiles, reinforcement rods. Future Perfect.

**Topic 2.1.15. Modern Architecture.**

30 St Mary Axe Skyscraper in London; the glass Louvre Pyramid; the project of Dubai Dynamic Tower. Future Perfect Continuous.

**Topic 2.1.16. Presentation on topic «Building materials».**

The comparison of building materials for structures; defining their properties, advantages and disadvantages.

**2.2. Module № 2 "Basic Structural Elements of Buildings".**

**Topic 2.2.1. Foundation.**

The main parts of a building. The concept of foundations. The functions of foundations and requirements to foundations. Noun. Countable and uncountable nouns.

**Topic 2.2.2. Types of foundations.**

Types of foundations and their special features. Pile foundation, pier foundation, strip foundation, slab foundation.

**Topic 2.2.3. Stages of foundation laying.**

Shallow foundations and deep foundations. The process of foundation laying. Plural form of nouns.

**Topic 2.2.4. The Leaning Tower of Pisa.**

The history of tower construction and its today's condition. Incorrect laying of the foundation of the Leaning Tower of Pisa and the projects for its strengthening.

**Topic 2.2.5. Types of walls.**

The types of walls in buildings (load-bearing and non-bearing walls, external and internal walls, curtain walls) and their functions. Article (definite, indefinite).

**Topic 2.2.6. Structural elements of a wall.**

Architectural structural elements of walls. Requirements to the construction of walls; functions of a wall. Articles with abstract nouns and materials.

**Topic 2.2.7. Thermal insulation and sound insulation of walls.**

Thermal insulation of walls. Insulating materials for walls. Sound insulation of walls. Article with proper nouns.

**Topic 2.2.8. Arch.**

Main structural elements of an arch: impost (springing line), keystone and rise. Types and shapes of an arch.

**Topic 2.2.9. Roof and covering.**

The concept of roofs. The function of a roof. Requirement to the roof covering. Materials for coverings. Adjective.

**Topic 2.2.10. Classification of roofs.**

Flat and sloping roofs, lean-to (shed) roofs, gable roofs, hipped roofs, mansard roofs. Adverb.

**Topic 2.2.11. Vault.**

Elements and shapes of vaults: a cylindrical vault, a groin vault, a rib vault. Comparisons of adjectives and adverbs. Dimensions (length, width, area, volume).

**Topic 2.2.12. Engineering systems and communication systems in buildings.**

Plumbing systems, pipelines and networks, electrical systems, heating systems, ventilation systems and and systems of air conditioning.

**Topic 2.2.13. Heating systems in a building.**

A typical scheme of the heating system of buildings. Types of heating systems, classification, advantages and disadvantages. Numeral: ordinal and cardinal numerals.

**Topic 2.2.14. Ventilation systems in a building.**

The purpose of ventilation. Classification of ventilation systems (natural and artificial, general and local). Fractions (common fractions, decimal fractions). Units of measurement in the construction industry.

**Topic 2.2.15. Air-conditioning systems.**

Wall split system, channel system, zonal system of air conditioning of buildings. Scales, degrees, mathematical functions.

**Topic 2.2.16. Presentation on topic «My ideal house».**

The basic structural elements of an ideal house.

## 3. LIST OF REFERENCES

### 3.1. Basic Literature

3.1.1. Шостак О.Г. Professional English of the Construction Industry : навч. посібн./ О. Шостак, Л. Конопляник. – К. : НАУ, 2017. – 308 с.

3.1.2.Акмалдинова О.М. Professional English. Airport Design and Maintenance : навч. посіб. / О.М. Акмалдинова, О.Г. Шостак. – К. : НАУ, 2012. – 292 с.

3.1.3. Англо-русский словарь по строительству и архитектуре / Стецкий С.В. – М. : «Архитектура-С», 2005. – 400 с.

### 3.2. Additional Literature

3.2.1. Brieger Nick and Pohl Alison. Technical English Vocabulary and Grammar. – Oxford : Summertown Publishing Ltd, 2006. – 148 p.

3.2.2. Caruzzo Patrizia. Flash on English for Construction. – Provo : ELI Publishing, 2013. – 48 p.

3.2.3. Fredo Evan. English for Construction. Vocational English. Level 2 : Course book. – New York : Pearson, 2012. – 80 p.

3.2.4. Heidenreich Sharon. English for Architects and Civil Engineers. – Wiesbaden, Springer-Verlag, 2008. – 189 p.

3.2.5. Романенко О. Німецька мова для студентів технічних спеціальностей : навч. посіб. / О.Романенко. – К.: «НАУ-друк», 2009. – 104 с.

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## АРКУШ ПОШИРЕННЯ ДОКУМЕНТА

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## УЗГОДЖЕННЯ ЗМІН

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