MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL AVIATION UNIVERSITY
Faculty of Air Navigation, Electronics and Telecommunications
Aviation English Department

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«15» 09 2021

APPROVED
Vice-Rector for Academics
_____ Anatolii POLUKHIN
«23» 10 2021

Quality Management System
COURSE TRAINING PROGRAM
on
«Professional Foreign Language»

Educational and Professional Programs: Telecommunication systems and networks
Computer-integrated radio information systems and technologies
Field of study: 17 Electronics and telecommunications
Speciality: 172 Telecommunications and radio engineering

Training Form	Seme -ster	Total (hours/ credits ECTS)	Lect ures	Practi- cals	Lab. clas.	Self- study	HW/ CGP	TP/CP	Semester Grade
Full-time	1-2	135/ 4.5	…..	68	–	67	…..		1-credit, 2-exam.

Index: СВ-2-172-1/21-1.3; СВ-2-172-2/21-1.3;

Course Training Program on «Professional Foreign Language» is developed on the basis of the Educational and Professional Programs on "Telecommunication systems and networks", "Computer-integrated radio information systems and technologies" Bachelor Curriculum and Extended Bachelor Curriculum CB-2-172-1/21; ECB-2-172-1/21; for Speciality 172 «Telecommunications and radio engineering», and corresponding normative documents.

Developed by:

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Discussed and approved by the Aviation English Department. Minutes № 10 of "30" August 2021

Head of the Department _____ N.Pazyura

Discussed and approved by the Graduate Department for Educational and Professional Programs "Telecommunication systems and networks", "Computer-integrated radio information systems and technologies" for Speciality 172 «Telecommunications and radio engineering» - Department of Telecommunication and Radio Engineering Systems, Minutes №21 of «09» 09 2021.

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«16» 09 2021

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Contents:

INTRODUCTION

Course Training Program on «Professional Foreign Language» is developed based on the "Methodical guidance for the subject course training program", approved by the order № 249/од, of 29.04.2021 and corresponding normative documents.

1. EXPLANATORY NOTES

1.1. Place, objectives, tasks of the subject

The subject "Professional Foreign Language" is the theoretical and practical basis of the set of knowledge and skills that form the profile of a specialist in the fields of Electronics and Telecommunications.

The purpose of teaching the subject is to acquire foreign language communication skills in a separate field of professional activity; to improve verbal communication and problem-solving skills; to study the specialized aviation terminology; to get acquainted with the latest achievements of science and technology in the field of air transportation infrastructure.

The tasks of the subject:

- preparing students for effective communication in their academic and professional environment;
- formation of communicative language competencies in real situations of academic and professional activity of future technical specialists;
- achieving the proficiency at the B1 level, which is the standard for obtaining a bachelor's degree.

1.2. Learning outcomes the subject makes it possible to achieve

As a result of studying this subject, the student must acquire the following learning outcomes (in complex with other educational components):

- use documentation related to professional activities, using modern technologies and office equipment; use English, including special terminology, for communication with specialists, conducting a literary search and reading texts on technical and professional topic;
- be able to learn new knowledge, advanced technologies and innovations, find new non-standard solutions and means of their implementation; meet the requirements of flexibility in overcoming obstacles and achieving goals, rational use and regulation of time, subject, responsibility for their decisions and activities;
- identify skills of independent and collective work, leadership skills, organize work in a limited time with an emphasis on professional integrity;

1.3. Competences the subject makes it possible to acquire

As a result of studying this subject, the student must acquire the following competencies (in particular, in combination with other educational components):

- ability to apply knowledge in practical situations;
- knowledge and understanding of the subject area and understanding of professional activity;
- ability to communicate in a foreign language;
- skills of using information and communication technologies;
- ability to learn and master modern knowledge;
- ability to search, process and analyze information from various sources;

1.4. Interdisciplinary Connections

This subject is based on knowledge of such subjects as "Higher Mathematics", "Physics" and is the basis for the study of further subjects, namely: "Fundamentals of Algorithmization and Programming in Electronics", “Fundamentals of Electronics” and others.

2. COURSE TRAINING PROGRAM ON THE SUBJECT

2.1. The subject content

Training material is structured according to the module principle and consists of **two educational modules:**

- **Module № 1 « History of aviation. The basic parts of an aircraft »,**
- **Module №2 «Radio Engineering. Telecommunications»,** which are logically complete, relatively independent, holistic part of the subject, learning of which provides module test and analysis of its performance.

2.2. Modular structuring and integrated requirements for each module

Module №1 « History of aviation. The basic parts of an aircraft »

Integrated requirements to the module №1:

(know the terminology of the specialty, be able to use basic grammatical constructions in speech and in writing, have the ability to communicate in a foreign language on the topics of the module)

Topic 1. History of Aviation.

The history of aviation development in the world and Ukraine. Outstanding aviators. Origins and current state of Ukrainian aviation. Grammar (Present Simple and Present Continuous). The movie "The History of Aviation".

Topic 2. Travelling by Air. Aviation English.

Study of basic terminology: differences between Aviation English and General English. Grammar: Like, love, enjoy, hate, mind, dislike/like talking about preferences. Speaking: discussion on the topic.

Topic 3. Types of aircraft.

Classification of the aircraft: civil aviation and military; types of engine and its quantity. Classification due to the components, aircraft speed, and type of the take off \ landing of the aircraft. Baloons and Airships. Grammar (Countables / Uncountables).

Topic 4. Parts of the aircraft.

Definition of the term “Aircraft”, main parts of the aircraft. **Aircraft power plant**: purpose of it and types, propeller and its classification. **Fuselage:** definition of the term, its function and forms. **Wing:** definition of the term, its purpose, structural components. Forms of the wing, operating principle, main winf mechanization elements. **Tail Unit:** definition of the term. Demands and forms of the tail unit, its componenets. **Landing Gear:** functions of it, types and kinds of the landing gear. Controlling. Visual demonstration in the hangar of NAU. Grammar (Articles).

Topic 5. Parts of the helicopter.

Definition of the term “Helicopter”, its main structural components. (Collocations. Compound Nouns).

Module №2 "Radio Engineering. Telecommunications"

Integrated requirements of the module №2: *(know the terminology of the specialty, be able to use basic grammatical constructions in speech and in writing, have the ability to communicate in a foreign language on the topics of the module)*

Topic 1. Origin of the radiotechnics.

History of the radiotechnics. Vocabulary drill. Grammar: Degrees of Comparison.

Topic 2. Radio Receivers.

Basic parameters. Grammar: Present Continuous. Official emails (differences between official and spoken languages)

Topic 3. Classification of the radio receivers and main characteristics.

Vocabulary drill. Grammar: Infinitive Construction.

Topic 4. Telecommunication Networks.

CRT. Gramar: Will or Going to? Information evaluation of the image. Television signal frequency spectrum. Vocabulary drill.

Topic 5. Modern informational technologies in information and communications systems. Information and data security.

Troubleshooting. Business perspectives in telecommunications. Environment.

2.3. Training schedule of the subject

№	Theme (thematic section)	Total, hour		
		Mode of study: Full-time education		
		Total	practical	Self-study
1	2	**3**	4	5
Module №1 « History of aviation. The basic parts of an aircraft»				
1.1	History of aviation	**1 semester**		
		4	2	2
1.2	Famous people in history of aviation	4	2	2
1.3	Time of 1st and 2nd World War	4	2	2
1.4	Aviation development in the 21st century	4	2	2
1.5	Travelling by air. Airport	4	2	2
1.6	Types of airplanes	4	2	2
1.7	Parts of the aircraft	4	2	2
1.8	Power plant	4	2	2
1.9	Fuselage	4	2	2
1.10	Wing	3	2	1
1.11	Tail unit	3	2	1
1.12	Landing gear	3	2	1
1.13	Parts of helicopter	3	2	1
1.14	Advantages of aircraft and helicopters	3	2	1

1.15	Collocations. Compound Nouns	3	2	1
1.16	Vocabulary and grammar review	3	2	1
1.17	Module test №1	3	2	1
Total by the module №1		**60**	**34**	**26**
Module №2 «Radio Engineering. Telecommunications»				
2.1	Origin of the radio engineering	**2 семестр**		
		5	2	3
2.2	Radio receivers	5	2	3
2.3	Radio receivers of frequency modulated signals Basic parameters. Structure	5	2	3
2.4	Classification of frequency modulated signals	5	2	3
2.5	Information radio systems. Characteristics	5	2	3
2.6	Classification of the radio receivers and main characteristics	5	2	3
2.7	Instruments and equipment. Engineer's workplace	5	2	3
2.8	Occupational health and safety. Prefixes of foreign origin	4	2	2
2.9	Types of circles	4	2	2
2.10	Telecommunication systems	4	2	2
2.11	Computer viruses and malware	4	2	2
2.12	Antivirus programs.	4	2	2
2.13	Information evaluation of the image.	4	2	2
2.14	Television signal frequency spectrum	4	2	2
2.15	Modern informational technologies in information and communications systems. Information and data security	4	2	2
2.16	Troubleshooting	4	2	2
2.17	Module test №2	4	2	2
	Total by the module №2	**75**	**34**	**41**
	Total by the subject	**135**	**68**	**67**

2.4. Question list for the examination

The list of questions and content of tasks for preparation for the exam are developed by the leading teacher of the department in accordance with the course training program, approved at the meeting of the department and distributed among students.

3. BASIC CONSEPTS OF GUIDANCE ON THE SUBJECT

3.1. Teaching methods

It is recommended to use the following teaching methods during mastering the subject:

- explanatory and illustrative method;
- method of problem presentation;
- reproductive method;
- research method.

The implementation of these methods are carried out during lectures, demonstrations, self-study, work with the educational material, analysis and solution of problems.

3.2. List of references

Basic literature

3.2.1. Virginia Evans, Jenny Dooley, Carl Taylor. Electronics. Express Publishing. 2012 – 117p.

3.2.2. Virginia Evans, Jenny Dooley, Stanley Wright. Informational Technology. Express Publishing. 2014-122p.

3.2.3. Charles Lloyd, James A. Frasier – Jr. MS. Engineering. Express Publishing. 2011 – 117 p.

3.2.4. Mark Ibbotson, Cambridge English for Engineering. Cambridge. 2011 – 110p.

3.2.5. Eric H. Glendinning, John Mc Evan. Oxford English for Information Technology. Oxford University Press. 2006 – 222p.

3.2.6. Santiago Remacha Esteras. Infotech. English for computer users. Cambridge University Press. 2007 - 172p.

Additional Literature

3.2.8. Jenny Dooley, Virginia Evans. Grammarway. Express Publishing. 2012 – 192p.

3.2.9. John Eastwood. Oxford Practice Grammar Intermediate. Oxord University Press. 2019-58p.

3.2.10. N.V. Pazyura. // Professional English for radio technical engineers: Guide to practical classes.- K. : NAU, 2017.- 66 p.

3.3. Internet Information resource

3.3.1. https://aviationenglishblog.com/aviation-grammar/

4. RATING SYSTEM OF KNOWLEDGE AND SKILLS ASSESSMENT

4.1. Assessment of certain kinds of student academic work is carried out in accordance with table 4.1. and 4.1.1

Table 4.1.

Kind of Academic Work	Maximum Grade Values
	Full-time training form
1 semester	
Module № 1	
Reading and analysis of professionally oriented texts	10
Listening to the professionally oriented texts	10
Writing information related to the topic	10
Monologue speaking based on the topic	10
Dialogic speaking based on the topic	10
Preparation of a report on the topic /	20
For admission to complete module test №1, a student must receive not less than	42
Carrying out Module Test №1	30
Total by module №1	100
Semester Grade	**100**
Total by the subject	**100**

The credit rating is determined (in points and on a national scale) based on the results of all types of educational work during the semester.

4.2. Completed types of educational work are credited to the student, if he received a positive rating for them (Table 4.1).

4.3. The sum of rating assessments received by the student for certain types of completed academic work is the current modular rating assessment, which is recorded in the module control.

4.4. The sum of the final semester modular and examination ratings, in points, is the final semester rating, which is converted into grades on the national scale and the ECTS scale (Annex 4).

- In the case of differentiated credit, the final semester rating is converted into a grade on the national scale and the ECTS scale (Annex 4).

4.5. The final semester rating in points, on the national scale and the ECTS scale is entered in the test report, study card and student record book, for example, as follows: 92 / Excellent / A, 87 / Good / B, 79 / Good / C, 68 / Set / D, 65 / Set / E, etc.

4.6. The final rating of the subject is equal to the final semester rating. The specified final rating assessment in the subject is entered in the Diploma Supplement.

Table 4.1.1 (exam)

Kind of Academic Work	Maximum Grade Values Full-time
2 **semester**	
Module № 2	
Reading and analysis of professionally oriented texts	10
Listening to the professionally oriented texts	10
Writing information related to the topic	10
Monologue speaking based on the topic	10
Dialogic speaking based on the topic	10
Module Test №2 Test (homework)	10
For admission to complete module test №2, a student must receive not less than	30
Total by module №2	**80**
Semester Grade	**20**
Total by the subject	**100**

4.7. The final rating of the subject is defined as the arithmetic mean of the final semester ratings in points (in this subject - for the first and second semesters) with its subsequent transfer to grades on the national ECTS scale.

The specified final rating assessment in the subject is entered in the Diploma Supplement.

(Ф 03.02 – 01)

АРКУШ ПОШИРЕННЯ ДОКУМЕНТА

№ прим.	Куди передано (підрозділ)	Дата видачі	П.І.Б. отримувача	Підпис отримувача	Примітки

(Ф 03.02 – 02)

АРКУШ ОЗНАЙОМЛЕННЯ З ДОКУМЕНТОМ

№ пор.	Прізвище, ім’я, по батькові	Підпис ознайомленої особи	Дата ознайом-лення	Примітки

(Ф 03.02 – 04)

АРКУШ РЕЄСТРАЦІЇ РЕВІЗІЇ

№ пор.	Прізвище, ім'я, по батькові	Дата ревізії	Підпис	Висновок щодо адекватності

(Ф 03.02 – 03)

АРКУШ ОБЛІКУ ЗМІН

№ зміни	№ листа (сторінки)				Підпис особи, яка внесла зміну	Дата внесення зміни	Дата введення зміни
	Зміненого	Заміненого	Нового	Анульованого			

(Ф 03.02 – 32)

УЗГОДЖЕННЯ ЗМІН

	Підпис	Ініціали, прізвище	Посада	Дата
Розробник				
Узгоджено				
Узгоджено				
Узгоджено				
Узгоджено				