



## Syllabus Course Program



# Foreign Language for Specific Purposes

### Specialty

113 - Applied Mathematics

### Institute

Educational and Scientific Institute of International  
Education

### Educational program

Intelligent Data Analysis

### Department

Foreign Languages Department

### Level of education

Master's level

### Course type

General, Mandatory

### Semester

1

### Language of instruction

Ukrainian, English

## Lecturers and course developers



### Lidiia Domochka

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Associate Professor of the Department of Foreign Languages of NTU «KhPI». Author (co-author) of 20 publications, 2 textbooks. Work experience since 2005. Extensive teaching at all university levels: Bachelor, Master, PhD. Training in the disciplines «English for Academic Purposes», «English for Specific Purposes», «English for Professional Communication», «English for Scientific Research», «English for Corporate System Development», «English for Business Communication».

[More about the lecturer on the department's website](#)

[Детальніше про викладача на сайті кафедри](#)

## General information

### Summary

The course "Foreign Language for Specific Purposes" is a basic academic discipline. It is studied in the 1<sup>st</sup> semester, covers all aspects of language proficiency: listening, dialogic and monologue speech, various types of reading, written speech, searching for information in a foreign language, academic oral and written speech and is an educational discipline from the cycle of special mandatory training in specialty 113 " Applied Mathematics ". The discipline is taught in 1 semester and in the amount of 90 hours (3 ECTS credits), in particular: practical classes – 32 hours, independent work – 58 hours. The study of the discipline ends with a credit test.

### Course objectives and goals

To form general and professional-oriented communicative speech competences for the Master's students to ensure their effective communication in the academic and professional environment. To contribute to the formation of Masters' abilities to solve problems of a research and/or innovative nature using the competencies acquired while studying a foreign language. To develop academic and professionally oriented communicative language competence, which will contribute to the conduct of scientific research necessary for writing a dissertation and presenting the results of their research in a foreign language both orally and in writing during the defense of the final thesis after completing the Master's degree.

## Format of classes

Classes, consultations, independent work. Formative assessment: practice tests. Final assessment: credit test.

## Competencies

GC 3. The ability to continuously learn, acquire new knowledge and skills, including in a field other than a professional one.

GC 4. The ability to identify, pose and solve problems in professional activities.

GC 5. The ability to generate new ideas (creativity) and non-standard approaches to their implementation, flexible adaptation to real professional situations, to show a creative approach, initiative.

GC 8. The ability to effectively build communication, based on the goals and situation of communication.

GC 9. The ability to prepare and make public speeches with a presentation of the obtained results, to prepare scientific and technical publications based on the results of the performed research, including a foreign language.

GC 10. The ability to carry out professional scientific and project-production activities in an international environment.

SC 6. The ability to organize the work of a team of performers to conduct research and project development, to make appropriate and economically justified organizational and management decisions.

SC 8. The ability to participate in the preparation of scientific and technical reports on the completed project or research works and in the implementation of the results of the conducted research and development.

SC 9. The ability to effective professional written and oral technical and scientific communication in the subject field in Ukrainian and one of the common European languages.

## Learning outcomes

LO 9. To demonstrate skills of interaction with other people, effective communication with specialists and society, ability to work in groups and teams, conflict and stress management.

LO 11. Demonstrate skills of professional communication, oral and written communication in Ukrainian and at least one other European language.

## Student workload

The total scope of the course is 90 hours. (3 ECTS credits): no lectures, practical classes – 32 hours, self-study – 58 hours.

## Course prerequisites

Bachelor's level of training.

## Features of the course, teaching and learning methods, and technologies

Conversations (with the teacher and classmates), work in pairs and groups, performing situational tasks, working with textbooks and manuals, role-playing games, writing letters, documents, annotations, abstracts, searching for information in printed literature on the assignment.

## Program of the course

### Topics of the practical classes

#### Content unit No. 1 (Professional Foreign Language):

Practical lesson 1-2

Topic 1. Lexical-stylistic and grammatical features of scientific and professional text.

Style of English-language scientific and professional text. Terms, internationalisms. Notations, symbols, abbreviations.

Typical grammatical structures.

The concept of equivalent. Limited machine translation capabilities.

Work methods for glossary formation.

Practical lesson 3

Topic 2. Genres of scientific and professional literature.

Linguistic features of the main genres of scientific publications: article, report, theses, abstract, abstract, scientific article, etc.

Types of scientific publication: theoretical, problematic, debatable, polemical, etc.

Global scientific language.

Practical lesson 4

Topic 3. Genres of scientific and professional literature.

Linguistic features of the main genres of scientific publications: article, report, theses, abstract, abstract, scientific article, etc.

Types of scientific publication: theoretical, problematic, debatable, polemical, etc.

Global scientific language.

Practical lesson 5-7

Topic 4. Typical functional structures of scientific and professional English.

System and purpose of typical functional structures. Working with speech clichés and patterns.

Practical lesson 8-9

Topic 5. Interpretation of visual aids accompanying the text.

Description of visual aids (graphs, tables, diagrams, drawings, etc.). Generalization of the main results of observation or experiment in graphic form.

Practical lesson 10

Topic 6. Scientific and written communication.

Organization of a scientific text: introduction, main part, conclusion.

Methods of scientific presentation: description, narration, reasoning.

Structural and semantic models of scientific presentation.

Formulation of the title of a scientific paper.

Application of functional structures in scientific and written communication.

Practical lesson 11

Topic 7. Referral.

Purpose and structure of the essay. Types of essays. Linguistic features of essays.

Practical lesson 12-13

Topic 8. Annotation, thesis writing.

Methodology of annotation.

Basic requirements for the language of scientific theses.

Practical lesson 14

Topic 9. Scientific article.

Structure, elements of a scientific article.

Basic linguistic requirements for the language of a scientific article.

Practical lesson 15-16

Topic 10. Dialogic speaking on professional topics.

Differences and similarities between oral and written forms of communication. Peculiarities of dialogic and monologic speech in the professional field.

Formulation of typical questions.

Discussion of the main trends in the development of the specialty. Discussion of the master's thesis.

Discussion of the results of scientific research.

## **Self-study**

For practical lesson 1-2:

Formation of a terminological glossary by profession, master's thesis.

Practice reading terms and international words. Tasks for the assimilation of typical lexical and grammatical structures.

Reading authentic literature by profession.

Practical tasks on the formulation of equivalents.

For practical lesson 3-4:

Reading authentic literature by profession.

Structuring, analysis, definition of main ideas, conclusions, systematization of what has been read  
Completing tasks to learn typical functional structures.

To practical lesson 5:

Reading authentic literature by profession. Description of graphs.

Descriptions of scientific works according to structural-semantic models: statement of fact-evidence-conclusion, statement of fact-commentary of fact-conclusion, thesis-antithesis-evidence-conclusion.

Tasks for mastering lexical-grammatical and functional structures for written presentation.

Writing an essay.

Before practical class 6-8

Reading authentic literature by profession.

Writing annotations.

Before the practical lesson 9-12:

Writing theses of a conference report.

Before practical class 13-14:

Translation of the main elements of a scientific article from the native language into English.

Rules for design of bibliographic sources, references.

Forming a glossary for writing an article on the topic of your scientific research.

Practice formulating typical questions.

Before practical class 15-16:

The task of learning language clichés for oral communication. Preparation of materials for discussion of the main trends in the development of the specialty, master's thesis, results of scientific research.

## Course materials and recommended reading

1. Gulich O. O. English language for the physical and mathematical direction: method. rec. for students of higher education of the first (bachelor) level in physics and mathematics. direction by specialty: 014.04 Secondary education (Mathematics), 014.08 Secondary education (Physics), 014.09 Secondary education (Informatics) / O. O. Gulich; Kharkiv. national ped. University named after H. S. Skovorody. - Kharkiv: Mitra, 2020. - 86 p. [Electronic resource].

<http://dspace.hnpu.edu.ua/handle/123456789/3932>

2. Professional English in use. Publishing and Printing: study guide for students of specialty 186 "Publishing and printing" / KPI named after Igor Sikorskyi; edited by: I. I. Antonenko, I. P. Borkovska, N. V. Chizhova. – Electronic text data (1 file: 6.2 MB). – Kyiv: KPI named after Igor Sikorskyi, 2021. – 169 p. [Electronic resource].

<https://ela.kpi.ua/handle/123456789/42218>

3. Diana Hopkins, Pauline Cullen. IELTS Grammar for Bands 6.5 and above. Cambridge University Press, 2021. – 268p. [Electronic resource].

<https://www.ieltsdaily.ir/static/downloads/IELTS%20GRAMMAR%20CAMBRIDGE%206.5%20AND%20ABOVE.pdf>

4. Functional structures of academic English. Methodical instructions for practical classes from the course "English for professional direction" for students of all specialties / comp. Lazareva O. Ya., Kovtun O. O., Dyomochka L. V., Kharkiv: NTU "KhPI", 2019. – 44 p.

<https://repository.kpi.kharkov.ua/handle/KhPI-Press/40643>

5. Doronkina, N. E. English-speaking professional course. Collection of text problems: study guide / N. E. Doronkina, L. V. Lomakina; KPI named after Igor Sikorsky. – Electronic text data (1 file: 153 Kbytes). – Kyiv: KPI named after Igor Sikorskyi, 2021. – 82 p. [Electronic resource].

<https://ela.kpi.ua/handle/123456789/39752>

6. O. Lazareva, O. Kovtun, L. Dyomochka. Science speaks English. Kharkiv: NTU "KhPI", 2019. – 276 p.

<https://repository.kpi.kharkov.ua/handle/KhPI-Press/40641>

## Additional materials

7. Zapotichna R. A. English for Specific Purposes: Economics in Use. (English for special purposes: Economics in practice) : study guide / R. A. Zapotichna. – Lviv: Lviv State University of Internal Affairs, 2021. – 88 p. [Electronic resource]. <http://dspace.lvduvs.edu.ua/handle/1234567890/3797>

8. Skovronska I. Yu. English for Information Technology and Computing: interactive educational guide / I. Yu. Skovronska, L. I. Kuzio, T. P. Dyak. – Lviv: Lviv State University of Internal Affairs, 2022. – 228 p. [Electronic resource]. <http://dspace.lvduvs.edu.ua/handle/1234567890/4433>
9. English grammar tests: methodological recommendations for students' independent work / L. G. Budanova, O. V. Karasyova, N. V. Latunova, I. S. Latunov ; ed. by L. G. Budanova. – Kharkiv : NUPh, 2019. – 63 p. [Electronic resource]. <http://dspace.nuph.edu.ua/handle/123456789/18931>
10. Budanova, L. G. Test your vocabulary : the collection of tests for independent students' work / L. G. Budanova, O. V. Shcherbina. – Kharkiv : NUPh, 2019. – 48 p. [Electronic resource]. <http://dspace.nuph.edu.ua/handle/123456789/18928>
11. O'Dell Felicity. Objective Advanced. Student's Book. 4th ed. / O'Dell Felicity, Broadhead Annie. – Cambridge University Press, 2019. - 232p. [Electronic resource]. [http://univer.nuczu.edu.ua/tmp\\_metod/1352/Black M. Capel A. Objective IELTS student%27s book.pdf](http://univer.nuczu.edu.ua/tmp_metod/1352/Black M. Capel A. Objective IELTS student%27s book.pdf)

## Assessment and grading

### Criteria for assessment of student performance, and the final score structure

100% final assessment in the form of an exam/credit test (40%) and progress tests (60%)  
 40% – a credit test  
 60% – progress tests  
 A credit test: written task, listening task, reading task and speaking.  
 Progress tests: 2 online tests (20% each).

### Grading scale

Total points	National	ECTS
90–100	Excellent	A
82–89	Good	B
74–81	Good	C
64–73	Satisfactory	D
60–63	Satisfactory	E
35–59	Unsatisfactory (requires additional learning)	FX
0–34	Unsatisfactory (requires repetition of the course)	F

## Norms of academic integrity and course policy

The student must adhere to the Code of Ethics of Academic Relations and Integrity of NTU «KhPI»: to demonstrate discipline, good manners, kindness, honesty, and responsibility. Conflict situations should be openly discussed in academic groups with a lecturer, and if it is impossible to resolve the conflict, they should be brought to the attention of the Institute's management.

Regulatory and legal documents related to the implementation of the principles of academic integrity at NTU «KhPI» are available on the website: <http://blogs.kpi.kharkov.ua/v2/nv/akademichna-dobrochesnist>.

## Approval

Approved by

Date, signature  
31.08.2023



Head of the Department  
Tatiana GONCHARENKO

Date, signature  
31.08.2023



Guarantor of the Educational Program  
Leonid LYUBCHYK