Syllabus
Course Program

Foreign Language

Specialty
172- Telecommunication and Radio Engineering

Institute
Institute of Education and Science in Engineering and Physics

Educational program
Telecommunication and Radio Engineering

Department
Department of Cross-Cultural Communication and Foreign Language (276)

Level of education
Bachelor's level

Course type
General Training, Mandatory

Semester
1-8

Language of instruction
English,

Lecturers and course developers

Zhanna Kushchenko

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PhD (Philology, Associate Professor, Associate Professor at the Department of Cross-Cultural Communication and Foreign Language

Work experience of 19 years. Author and co-author of over 40 scientific and methodological publications.
Courses taught: "Foreign language" (English), "Foreign language for professional purposes", "Second Foreign language (French)"
More about the lecturer on the department's website
https://web.kpi.kharkov.ua/mkia/lecturers/zhanna-kushchenko/

General information

Summary

The study of foreign languages is a necessary and integral part of general educational professional training of bachelors. This is due to the internationalization of communication, the development of cooperation of specialists at the global level. Therefore, when learning a foreign language, the priority is to know the structures and strategies of professional discourse, forms and means of communication, as well as the skill to operate them. The course of learning a foreign language is, therefore, professionally oriented and communicative. The discipline is aimed at the integrated implementation of practical, educational, developmental and educational goals.

Course objectives and goals

The purpose of teaching the discipline "Foreign Language" is to prepare students for effective communication in their academic and professional environment. The main tasks of studying the discipline are mastering at the appropriate level four types of speech activity in oral (listening and speaking) and written (reading and writing) forms; the use of sociocultural knowledge and skills in foreign language communication; assessment and analysis of their own educational experience and improvement of their educational strategies.

Format of classes

Workshops, consultations, self-study. Final control in the form of a test (semesters 1-7) and an exam (semester 8).

Competencies

ZK-1. Ability to abstract thinking, analysis and synthesis.
ZK-4. Knowledge and understanding of the subject area and understanding of professional activity.
ZK-6. Ability to work in a team.
ZK-7. Ability to learn and master modern knowledge.
ZK-8. Ability to identify, pose and solve problems.

Learning outcomes

PRN - 5 - skills of evaluation, interpretation and synthesis of information and data;
PRN - 7 - competently apply the terminology of telecommunications and radio engineering;
PRN - 10 - communicate on professional issues, including oral and written communication in the state language and one of the common European languages (English, German, Italian, French, Spanish);
PRN - 11 - Apply interpersonal skills to interact with others and engage them in teamwork.

Student workload

The total volume of the course is 480 hours (16 ECTS credits): workshops - 236 hours, self-study - 244 hours.

Course prerequisites

To successfully complete the course, it is necessary to have knowledge and practical skills acquired when getting secondary education.

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

In order to activate the educational and cognitive activity of students, the use of both active and interactive educational technologies is provided, including individual and team work, issue-oriented lectures, mini-lectures, work in small groups, seminars-discussions, brainstorming, case studies, presentations, gamification, project works, scenario method, etc.

Program of the course

Topics of the lectures

No lectures.

Topics of the workshops

Semester 1
Topic 1. Familiarization with the course content. Convergence in the field of telecommunications and IT. English Tenses, Active Voice.
Topic 2. Convergence in technology. Convergence in business. Convergent future. English Tenses, Active Voice.
Topic 3. Mobility. Mobile devices. Interrogative questions and peculiarities of their formation. English Tenses, Active Voice.
Topic 4. Mobile technologies in retail. English Tenses, Active Voice.
Topic 5. Software. The process of software development. Software solutions. English Tenses, Active Voice.
Topic 6. Project management. English Tenses, Active Voice.
Topic 7 Networks. Global infrastructure. Features of the professional activity of a trainer-teacher. English Tenses, Active Voice.
Topic 8. Corporate networks. Network management. English Tenses, Active Voice.
Semester 2
Topic 9. Data centers and security. English Tenses, Active Voice.
Topic 10. Information security. Banking security. English Tenses, Passive Voice.
Topic 11 Active Services. Managed services. English Tenses, Passive Voice.

Topic 12 Service Level Agreement. Negotiating a service level agreement. Acquisition, features of use. Passive voice of verbs. Simple Passive.
Topic 13. Media. Television. Media startups. English Tenses, Passive Voice.
Topic 14. Ease of use of the site. English Tenses, Passive Voice.
Topic 15. Social. Healthcare. Monitoring. Degrees of Comparison of Adverbs and Adjectives.
Topic 16. Introduction of technologies in society. Degrees of Comparison of Adverbs and Adjectives.
Semester 3
Topic 17. Consumer electronics. Degrees of Comparison of Adverbs and Adjectives.
Topic 18. Electronics basics part 1. Degrees of Comparison of Adverbs and Adjectives.
Topic 19. Fundamentals of Electronics part 2. Telephone conversations. Degrees of Comparison of Adverbs and Adjectives.
Topic 20. Tools part 1. Degrees of Comparison of Adverbs and Adjectives.
Topic 21. Tools part 2. Modal Verbs.
Topic 22. Soldering tools. Modal Verbs.
Topic 23 Counters. Modal Verbs.
Topic 24. Workspace. Modal Verbs.
Semester 4
Topic 25. Job responsibilities part 1. Modal Verbs.
Topic 26. Job descriptions part 2. Modal Verbs.
Topic 27. Working conditions. Modal Verbs.
Topic 28. The working environment. Direct/Indirect speech. Sequence of Tenses.
Topic 29. Electrical safety. Direct/Indirect speech. Sequence of Tenses.
Topic 30. Mathematics. Solving problems in the work environment. Development of written communication skills. Direct/Indirect speech. Sequence of Tenses.
Topic 31. Units of measurement. Conditionals.
Topic 32. Prefixes. Conditionals.
Semester 5
Topic 33. Personality. Publicity. Media. Digital media. Conditionals.
Topic 34. Problems. Personal problems. Feelings. Crimes. Conditionals.
Semester 5
Topic 35. Traditions and customs. Culture. Infinitive, Gerund, Participle I, Participle II: forms and use.
Topic 36. American English and British English. Distinctive and common features.
Semester 6
Topic 37 Vacation and tourism. Varieties of outdoor activities. Types of traveling.
Topic 38. Connections. Relationships. Infinitive, Gerund, Participle I, Participle II: forms and use.
Topic 39. Health. Nutrition. Diseases. Treatment. Infinitive, Gerund, Participle I, Participle II: forms and use.
Topic 40. Healthy lifestyle. Healthy nutrition. Eco-cities. Infinitive, Gerund, Participle I, Participle II: forms and use.
Semester 7
Topic 41 Urban legends. Information wars. Fake news. Fact-checking. Infinitive, Gerund, Participle I, Participle II: forms and use.
Topic 42. Protests. Hashtag activists Grammar review.
Semester 8
Topic 43. Consumption. Money. Shopping Grammar review.
Topic 44. Online shopping. Culture of online consumers Grammar review.

Topics of the laboratory classes

No laboratory classes.

Self-study

Self-study includes preparation for workshops, independent study of topics and issues that are not taught in workshops, and completion of an individual task.
Topics of individual tasks (project work):
Semester 1
1. Convergence of telecommunication networks and services.
2. New generation television systems.

3. Multiservice communication networks of the next generations.
4. Information security systems.
5. Optical technologies in telecommunications.
6. Methods of designing multiservice systems and networks.
7. Internet services and cloud computing service platforms.
8. Home networks "at home".
Semester 2
9. Service-oriented technologies and infocommunication services.
10. Broadband optical telecommunication systems.
11. Means of communication of computerized systems.
12. Radio communication systems.
13. Radio electronic systems.
14. Mobile communication systems.
15. Modeling of information network channels.
16. Technique of modern radiating systems.
Semester 3
17. Specialized microprocessors in information networks.
18. Antennas with signal processing.
19. Radio frequency identification.
20. Energy saving technologies
21. Evolutionary electronics
22. Means of effective communication.
23. Sensor networks.
24. Digital signal microprocessors.
Semester 4
25. Broadband information transmission technologies.
26. Information and communication technologies.
27. Global information infrastructure.
28. Planning and design of information networks.
29. Converged service platforms for next generation networks.
30. Wireless sensor networks.
31. Mobile communication networks of the 4th and 5th generations.
32. 4G/5G network operation.
Semester 5
33. Technologies of the next generation mobile communication network.
34. Methods of multimedia information processing.
35. Internet of things and smart devices.
36. Telecommunication and information networks.
Semester 6
37. Logistics in information and communication systems.
38. Management and network administration of enterprises.
39. Configuration and engineering of new generations of information and communication networks.
40. Service-oriented technologies and infocommunication services.
Semester 7
41. Infocommunication services and quality of service in ICS.
42. WEB-programming.
Semester 8
43. Development, testing and operation of applications in cloud technologies.
44. Hardware and software platforms for mobile communications.

Course materials and recommended reading

Course materials:
1. Academic Writing Course. R.N. Jordan, Longman, 2008.
2. Career Paths English: Information Technology. Virginia Evans, Jenny Dooley, Stanley Wright, Express Publishing, 2011.

3. Check Your English Vocabulary for Computers and Information Technology. Vocabulary Workbook. Jonathan Marks, A & C Black Publishers Ltd, 2007.
4. English for Emails. Oxford University Press, 2007.
5. English for Socialising. S. Gore, D.G. Smith, Oxford University Press, 2007.
6. English for Telephoning. Oxford University Press, 2006.
7. English for Telecoms and Information Technology. Tom Ricca-McCarthy
8. Michael Duckworth Oxford University Press, 2017.
9. English Grammar in Use. R. Murphy, Cambridge University Press, 2006.
10. Esteras S. R. Infotech 4. English for computer users. Cambridge, 2009
11. Esteras S. R. Infotech 4. English for computer users. Workbook- Cambridge, 2009
12. Exam Booster. Preperation for B2+ Level Exams. Virginia Evans, Jenny Dooley.Express Publishing, 2020.
13. Oxford English for Computing. Keith Boeckner, P. Charles Brown, Oxford University Press, 2005.
14. Professional English in Use ICT. For Computers and the Internet. Santiago Remacha Esteras, Elena Marco Fabre, Cambridge University Press, 2007.
15. Solutions. Upper-intermediate. Student's Book/ Workbook. 3rd Edition. Tim Falla, Paul A Davies. Oxford University Press, 2017.

Internet-resources:
1. www.oup.com
2. www.pearsonlongman.com
3. www.cambridge.org
4. http://www.bbc.co.uk/worldservice/learningenglish/
5. http://learningenglish.voanews.com/

Assessment and grading

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

100% Final assessment as a result of a test (20%) and continuous assessment (80%).
20% test: project work and its oral presentation
80% Continuous assessment:
20% test papers
30% workshops;
20% self-study
10% individual tasks

100% Final assessment as a result of an exam (20%) and continuous assessment (80%).
20% exam: project work and its oral presentation
80% continuous assessment:
20% test papers
30% workshops;
20% self-study
10% individual tasks

Grading scale

Total points	*National*	*ECTS*
90–100	*Excellent*	*A*
82–89	*Good*	*B*
75–81	*Good*	*C*
64–74	*Satisfactory*	*D*
60–63	*Satisfactory*	*E*
35–59	*Unsatisfactory (requires additional learning)*	*FX*
1–34	*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*	*Head of the department* *Tetyana Sergeyeva*
	Date, signature	*Guarantor of the educational program* *Oleksandr Serkov*