National Technical University of Ukraine
"Igor Sikorsky Kyiv Polytechnic Institute"

Department of
Technical English No. 1

Practical foreign language course. Part 1 (English) Syllabus
Thematic cluster 4 – Engineering and manufacturing

Course details	
Level of higher education	***First (bachelor's)***
Specialty	For specialties 131 Applied Mechanics 132 Materials Science 133 Industrial Engineering 134 Aviation and rocket and space technology 136 Metallurgy 141 Electrical Power Engineering, Electrical Engineering, and Electromechanics 142 Power Engineering 143 Nuclear Power Engineering 144 Thermal power engineering 161 Chemical technologies and engineering 162 Biotechnology and Bioengineering 163 Biomedical Engineering 171 Electronics 172 Electronic Communications and Radio Engineering 173 Avionics 174 Automation, Computer-Integrated Technologies, and Robotics 175 Information and measurement technologies 176 Micro- and Nanosystem Technology 183 Environmental protection technologies 184 Mining 186 Publishing and printing
Educational program	For all educational programs
Subject status	Regulatory
Form of study	Full-time (daytime)
Year of training, semester	1st year (1st and 2nd semesters)
Scope of the discipline	3 credits (ECTS). Total scope of the discipline 90 hours: practical lessons – 72 hours, independent work – 18 hours.
Semester control/control measures	MODULE TEST (1 semester), credit (2 semester)
lesson schedule	1 lesson per week according to the schedule http://rozklad.kpi.ua/
Language of instruction	English
Information about the course coordinator/teachers	Department teachers: KAMTS No. 1 - http://kamts1.kpi.ua/ Coordinator: Associate Professor Tetiana Kravchenko Contact phone number: 044 204 81 99 Email kravchenko.tetiana@lll.kpi.ua
Course location	The course is hosted on the Sikorsky platform: and on the department website http://kamts1.kpi.ua/

Curriculum

1. **Description of the academic discipline, its purpose, subject matter, and learning outcomes**

The academic discipline "Practical Foreign Language Course" belongs to the cycle of social and humanitarian training. The subject of the academic discipline "Practical Foreign Language Course" is defined as a set of linguistic and speech knowledge, skills, and abilities necessary for the formation of foreign language communicative competence in social, everyday, and professional spheres.

First-year students study the educational component "Practical Foreign Language Course. Part 1," **the purpose** of which is to acquire knowledge, improve skills, and develop the ability to use a foreign language effectively and adaptively in various situations of social and academic communication in accordance with the needs of intercultural communication.

While studying the discipline, students acquire **general competencies**:

The ability to apply knowledge in practical situations The ability to work in a team.

The acquired competencies form **the** following **program learning outcomes** in students:

- 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)

Upon completion of the educational component, there is a promising transition to level B1+, whose descriptors provide for an advanced level of language skills and abilities, namely:

- **speaking**: maintaining interaction and expressing oneself in a range of contexts, for example: following the main points of a broad discussion; expressing or formulating one's own views and opinions in an informal discussion; maintaining a conversation or discussion, even with pauses for grammatical and lexical planning and correction; engage in conversation on familiar topics without preparation; express dissatisfaction; show initiative in interviews/consultations; summarize and express one's opinion about a short story, article, conversation, discussion, interview, or document and answer follow-up questions about details; conduct a prepared interview; describe a process, giving detailed instructions; exchange accumulated factual information about everyday life and unusual events that are in some way related to peRASnal and intercultural interests;
- **Listening**: understand factual information by identifying both the general content of messages, educational and academic lectures, instructions, etc., and specific details of audio materials on topics of peRASnal and intercultural interest;
- **reading**: understand the main content of formal written communication and convey this information to others; obtain information from a large volume of authentic text or several texts in order to find the necessary information or to determine the subject of the publication; understand the general meaning of a written message using metatextual units; be able to use context to determine the meaning of a part of a text or individual lexical units;

2. **Writing**: write coherent texts on a range of familiar topics within their sphere of interest, summarizing and evaluating information and arguments from a number of sources; write a message or essay with developed arguments, giving evidence for and against a particular point of view and explaining the advantages and disadvantages of different options; summarize information and arguments from a number of sources.Prerequisites and post-requisites of the discipline (place in the structural-logical scheme of training under the relevant educational program)

Prerequisites: basic level of foreign language proficiency not lower than B1 according to the Common European Framework of Reference for Languages, acquired as a result of completing the school program.

Post-requisites: continuation of the study of the discipline "Practical Foreign Language Course" under the educational component "Practical Foreign Language Course. Part 2" with the aim of mastering level B1+.

3. **Contents of the discipline**

Thematic plan of the educational component

1 Semester

Topic 1. Understanding Your Field
Topic 2. Introduction to Engineering Disciplines
Topic 3. Measurements and Dimensions
Topic 4. Materials in Engineering

2 Semester

Topic 5. Equipment and Tools
Topic 6. Mechanisms and Mechanical Systems
Topic 7. Processes and Procedures
Topic 8. Documentation in Engineering

4. Teaching materials and resources

Basic literature:

1. Cunningham, R., & Dooley, J. (2018). *Career Paths: Industrial Engineering. Book 3.* (with Digibooks Application) Express Publishing.
2. Dearholt, J. D. (2018). *Career Paths: Mechanics. Book 3.* (with Digibooks Application) Express Publishing.
3. Evans, V., Dooley, J., Lehnert, J. (2018*). Career Paths: Medical Equipment Repair. Book 1.* Express Publishing.
4. Evans, V., Dooley, J., Prinja, A. (2018). *Career Paths: Nuclear Engineering. Book 3.* Express Publishing.
5. Evans, V., Dooley, J., Rodgers, K. (2022). *Career Paths: Natural Resources II. Mining. Book 3.* Express Publishing.
6. Evans, V., Dooley, J., Taylor, C. (2012*). Career Paths: Electronics. Book 3.* Express Publishing.
7. Lloyd, C., & Frazier, J. A. (2012). *Career Paths: Engineering. Book 3.* Express Publishing.
8. Norton, E., & Dooley, J. (2018). *Career Paths: Chemical Engineering. Book 3*. (with Digibooks Application) Express Publishing.
9. Norton, E., & Dooley, J. (2014). *Career Paths: Mechanical Engineering. Book 1*. (with Digibooks Application) Express Publishing.
10. Bonamy, D. (2022). *Technical English 2.* Coursebook. (2nd ed.). Harlow: PeaRASn Longman.

Supplementary literature:

1. Brieger, N., & Pohl, A. (2007). *Technical English vocabulary and grammar*: Summertown Publishing.
2. Dooley, J. & Evans, V. (2008). *Grammarway 3*. Express Publishing.
3. Evans, V., Dooley, J., & Taylor, C. (2018). *Career Paths: Electronics: Book 3*. Express Publishing.Evans, V., & Dooley, J. (2018). *On screen B1+. Student's Book*. Newbury. Express Publishing.
4. Evans, V., Dooley, J., & Nawathe, V. (2018). *Career Paths: Computer Engineering* (2nd *edition): Student's Book* (with Digibooks Application) Express Publishing.
5. Evans, V., Dooley, J., & Esparza, J. (2012). *Career paths: Civil aviation* - Student's book. Express Publishing.
6. Emery, H., Kennedy, J., & Roberts, A. (2008). *Aviation English: For ICAO compliance.* Student's book. Macmillan Education.
7. Foley, M. & Hall, D. (2019). *MyGrammarLab. Intermediate B1/B2.* PeaRASn.
8. King, D. (2005). *Socializing*. Delta Publishing.
9. Morgan, D., & Regan, N. (2023). Take-off: Technical English for engineering course book (2023 edition) [eBook 319194].
10. Mann, M. & Taylore-Knowles, S. (2008). *Destination B1*. Macmillan.
11. Murphy, R. (2019). *English Grammar in Use: A self-reference and practice book for intermediate students of English*. Fifth edition. Cambridge University Press.
12. Wilson J, Clare A. (2022). *Speakout. Intermediate.* Students' Book. 3rd edition. PeaRASn Education Limited.

Online resources:

https://learnenglish.britishcouncil.org/en/english-emails
https://esol.britishcouncil.org
https://learnenglishteens.britishcouncil.org/
https://www.bbc.co.uk/learningenglish/

Educational content

5. Methodology for mastering the academic discipline

The general methodological approach to teaching the academic discipline "Practical Foreign Language Course" is defined as communicative-cognitive, activity-oriented, with the student as the subject of learning at its center. The methodology of teaching a foreign language combines the basic principles of communicative methodology aimed at developing foreign language communication skills, in which communication is both the ultimate goal of language learning and the means of achieving it. The work in practical lessons is aimed at acquiring knowledge, developing and improving skills and abilities to communicate in a foreign language environment, effectively processing foreign language sources of information, selecting the necessary information, developing critical analysis skills and abilities, and developing foreign language written communication skills and abilities.

No.	Topic	lessonroom hours
1 semester		
1	Topic 1. 1. Understanding Your Field: Effective communication skills. Introduction to the course. Practical task: taking the entrance test.	2
2	Topic 1. 2. Understanding Your Field: Effective writing skills. Practical task: completing exercises related to the topic of the lesson.	2
3	Topic 1.3 Understanding Your Field: Effective presentation skills. Practical task: completing exercises related to the topic of the lesson.	2
4	Topic 1.4. Understanding Your Field: Revision. Practical task: reviewing the material studied.	2
5	Topic 2. 1. Introduction to Engineering Disciplines: Overview of major engineering fields. Practical task: completing exercises related to the topic of the lesson.	2
6	Topic 2. 2. Introduction to Engineering Disciplines: Interdisciplinary and emerging engineering fields. Practical task: completing exercises related to the topic of the lesson.	2
7	Topic 2. 3. Introduction to Engineering Disciplines: Skills and competencies in engineering. Practical task: performing exercises related to the topic of the lesson.	2
8	Topic 2. 4. Introduction to Engineering Disciplines: Revision. Practical task: revision of the material studied. Ongoing assessment.	2
9	Topic 3. 1. Measurements and Dimensions: Units of measurement: SI units, conversions, and practical applications. Practical task: completing exercises related to the topic of the lesson.	2
10	Topic 3. 2. Measurements and Dimensions: Dimensioning in engineering drawings. Practical task: completing exercises related to the topic of the lesson.	2
11	Topic 3. 3. Measurements and Dimensions: Precision and accuracy in measurements. Practical task: performing exercises related to the topic of the lesson.	2
12	Topic 3. 4. Measurements and Dimensions: Revision. Practical task: revision of the material studied.	2
13	Topic 4. 1. Materials in Engineering: Types of materials. Practical task: completing exercises related to the topic of the lesson.	2
14	Topic 4. 2. Materials in Engineering: Material properties. Practical task: completing exercises related to the topic of the lesson.	2
15	Topic 4. 3. Materials in Engineering: Material selection criteria and testing. Practical task: completing exercises related to the topic of the lesson.	2
16	Topic 4. 4. Materials in Engineering: Revision. Practical task: Revision of the material studied. Preparation for the Module test.	2
17	Module test .	2
18	Summing up the semester. Review of the material studied.	2
2nd semester		
19	Topic 5.1. Equipment and Tools: Types of engineering equipment. Practical task: diagnostic testing; completing exercises related to the topic of the lesson.	2
20	Topic 5.2. Equipment and Tools: Functions and applications. Practical task: performing exercises related to the topic of the lesson.	2
21	Topic 5.3. Equipment and Tools: Specialized instruments. Practical task: performing exercises related to the topic of the lesson.	2

22	Topic 5.4. Equipment and Tools: Revision. Practical task: completing exercises related to the topic of the lesson.	2
23	Topic 6.1. Mechanisms and Mechanical Systems: Forces, motion, and energy. Practical task: review of the material studied.	2
24	Topic 6.2. Mechanisms and Mechanical Systems: Components of mechanical systems. Practical task: performing exercises related to the topic of the lesson.	2
25	Topic 6.3. Mechanisms and Mechanical Systems: Mechanical system design and analysis. Practical task: performing exercises related to the topic of the lesson.	2
26	Topic 6.4. Mechanisms and Mechanical Systems: Revision. Practical task: revision of the material. Ongoing testing.	2
27	Topic 7.1. Processes and Procedures: Design and manufacturing.	2
	Practical task: completing exercises related to the topic of the lesson.	
28	Topic 7.2. Processes and Procedures: Testing and maintenance. Practical task: completing exercises related to the topic of the lesson.	2
29	Topic 7.3. Processes and Procedures: Quality assurance and control measures. Practical task: completing exercises related to the topic of the lesson.	2
30	Topic 7.4. Processes and Procedures: Revision. Practical task: revision of the material studied.	2
31	Topic 8.1. Documentation in Engineering: Technical documentation (reports, manuals, and specifications) Practical task: completing exercises related to the topic of the lesson.	2
32	Topic 8.2. Documentation in Engineering: Diagrams, graphs, and charts in technical communication Practical task: completing exercises related to the topic of the lesson.	2
33	Topic 8.3. Documentation in Engineering: Visualization tools and techniques for presenting engineering data Practical task: completing exercises related to the topic of the lesson.	2
34	Topic 8.4. Documentation in Engineering: Revision. Review of the material studied. Preparation for the final test.	2
35	Final test	2
36	Credit	2
	TOTAL	**72**

6. Independent work by the student

Independent work is the main means of assimilating educational material outside of lesson time and includes: preparation for practical lessons, studying additional material, preparation for Module test s and exams, and completion of individual assignments. Individual assignments are one form of independent learning aimed at deepening, generalizing, and consolidating the knowledge, skills, and abilities that students acquire in the process of formal learning. Typical individual assignments may include: completing tasks on the Sikorsky platform, competitive creative works, interactive posters and presentations, virtual trips, writing essays, completing exercises of varying degrees of difficulty on an individual basis, etc.

Distribution of hours between lesson room and independent work

Names of content modules	Number of hours		
	Total	Including	
		Practical	SRC
1 semester			
Practical lessons	39	34	5
Module test	6	2	4
Total (1 semester)	**45**	**36**	**9**
2nd semester			
Practical lessons	35	32	3
Final test	2	2	-
Credit	8	2	6
Total (2nd semester)	**45**	**36**	**9**
TOTAL	**90**	**72**	**18**

Policy and control

7. Academic discipline policy

The educational component "Practical Foreign Language Course" is exclusively practical in nature, therefore, for successful learning, it is necessary to study materials for preparation for practical lessons on topics, work with basic and additional literature.

All necessary teaching materials are posted by the instructor in the Sikorsky online environment, which is accessible to students studying this educational component.

Students receive up-to-date information on the organization of the educational process for the discipline through messages on the Electronic Campus or through the official channel of the department in the Telegram messenger. During blended or distance learning, practical lessons are held in the format of video conferences on the Zoom/Google Meet/Microsoft Teams/Blue Button/Discord platform.

Assessment is carried out according to an agreed rating system. Expected learning outcomes, control measures, and deadlines are announced to students at the first lesson.

Bonus points may be awarded for participation in scientific and practical conferences, competitions, and in the case of recognition of learning outcomes acquired through non-formal and/or informal education.

Bonus points for participation in events of various levels may constitute no more than 10% of the total rating, i.e., no more than 10 points per academic year.

Type of event/Level	International	All-Ukrainian	University
Scientific conference with a presentation in a foreign language language	5	4	2.5-0.5
Creative works competition with presentation in a foreign language	5	4	2.5-0.5
Foreign language competition	5	4	2.5-0.5

Academic integrity

Students must adhere to the Code of Honor of Igor Sikorsky Kyiv Polytechnic Institute, the principles of academic integrity, and the norms of ethical behavior: to demonstrate discipline, politeness, friendliness, honesty, and responsibility.

The policy and principles of academic integrity are defined in Section 3 of the Code of Honor of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute." For more details, see: https://kpi.ua/code.

All works are checked for plagiarism and the use of AI (https://osvita.kpi.ua/node/1225). Works in which signs of academic dishonesty are found are canceled.

Standards of ethical behavior

The standards of ethical conduct for students and employees are defined in Section 2 of the Code of Honor of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute." For more information, visit: https://kpi.ua/code

8. Types of control and the learning outcomes assessment rating system (LOAS)

Ongoing assessment. The instructor regularly enters the results of ongoing assessment into the "Ongoing Assessment" module of the Electronic Campus in accordance with the Regulations on ongoing, calendar and semester assessment at Igor Sikorsky Kyiv Polytechnic Institute. More details: https://document.kpi.ua/2020_7-137. Students can view their current assessment results in their Personal account on the Electronic Campus.

During the first lesson, students are introduced to the rating system of assessment (RSA) for the discipline, which is based on the Regulations on the system of assessment of learning outcomes https://document.kpi.ua/files/2020_1-273.pdf

In particular, a student's rating for a discipline consists of points that can be earned for answers in practical lessons during two semesters and for completing the Module test in the first semester and the final test in the second semester. During the first lesson of each semester, entrance and diagnostic testing is conducted, the results of which are not included in the student rating.

According to the Regulations on current, calendar, and semester control of learning outcomes at Igor Sikorsky KPI (https://osvita.kpi.ua/node/32) and the Regulations for conducting semester control in a remote mode (https://osvita.kpi.ua/node/368 calendar control - attestation - is conducted on 7-8 and 14-
15 weeks of each semester of study and is implemented by determining the level of compliance of the student's current performance rating with the criteria specified in the RAS.

No.	Type of measure	%	Weight	Number	Total
1.	Work in practical lessons (1st semester – 16 lessons; 2nd semester – 16 lessons)	80%	2.5	32	80
2	Modular control work (1 semester)	10%	10	1	10
3	Final test (2nd semester)	10	10	1	10
				Total	**10**

Criteria for assessing mastery of the educational component

The maximum weight score for work in a practical lesson is 2.5 points.

Assessment	Weight	Assessment criteria
Excellent	2.5	Very active participation in practical lessons, complete and correct completion of educational tasks taking into account the material studied on the topic of the lesson (95%-100% of the volume of tasks and the number of correct answers); minor errors are possible minor errors
Very good	2	active participation in practical lessons, complete and correct completion of educational tasks taking into account the material studied on the topic of the lesson, not less than (85%-94% of the volume tasks); minor errors

Good	1.5	Sufficiently active work during practical lessons, partial completion of educational tasks taking into account the material studied on the topic of the lesson (75%-84% of the volume of tasks and number of correct answers); errors or answers with minor inaccuracies
Satisfactory	1	moderately active work during the practical lesson, partial completion of educational tasks taking into account the material studied on the topic of the lesson (65%-74% of the volume of tasks and number of correct answers); errors or answers with inaccuracies; if the applicant is not prepared to for the practical lesson, but actively working on using the practical lesson material, the work will be assessed according to this criterion
Sufficient	0.5	low activity during the practical lesson, completion of educational tasks taking into account the material studied on the topic of the lesson (60-64% of the volume of tasks and the number of correct answers); there are gross errors or answers with inaccuracies; if the applicant is not prepared for the practical lesson, but is actively working on using the material of the practical lesson, the work will be evaluated according to this criterion
Unsatisfactory	0	the applicant is not prepared for the practical lesson; does not works during the practical lesson

Calendar control (CC) of students is carried out according to the current rating. The condition for satisfactory certification is that the student's current rating is not less than 50% of the maximum possible at the time of calendar control

CC term		**Maximum current rating**	**Minimum current rating rating (50%)**
3rd semester	8 weeks (first CC)	17.5	8.75
	Week 14 (second CC)	32.5	16.2
4th semester	8 weeks (third CC)	70	35
	14 weeks (fourth CC)	85	42

The modular control work (MCW) is conducted to check students' mastery of the module material in the penultimate lesson of the fall semester, and the final test (FT) is conducted in the penultimate lesson of the spring semester. The purpose of the MCT and FT is to check the level of language skills in listening, reading, grammar, writing, and speaking.

The module control work/final test consists of the following tasks:

1) Listening comprehension (5 questions). Maximum number of points – 10, each question – 2 points.
2) Comprehension of the text (10 questions). Maximum number of points – 20, each question is worth 2 points.
3) Use of language to test the student's lexical skills (10 questions). Maximum number of points – 10, each question – 1 point.
4) Use of language to test the student's grammar skills (20 sentences). Maximum number of points – 20, each question – 1 point.
5) A writing task designed to test the ability to write a coherent and logically complete text in a foreign language. Maximum number of points – 10.
6) Speaking: conversation on suggested topics. Monologue: maximum number of points – 10. Dialogue: maximum number of points – 20.

To simplify the calculation, we introduce a coefficient of 0.1. Thus, the maximum number of points for MODULE TEST /MT: 100 points x 0.1 = 10 points.

Retaking the Module test is not allowed.

Semester control in the form of a test is conducted during the last lesson of the spring semester. During the penultimate lesson of the spring semester,final calculation of the RD rating for students, with bonus points added for creative work.

Students who have scored RD≥60 points have the opportunity to

- receive a credit grade (credit) automatically according to their rating. In this case, *RD* points and corresponding grades are entered into the credit-examination record;
- take a credit test in order to improve their grade.

If the grade for the credit test is higher than the "automatic" grade based on the rating, the student receives a grade based on the results of the credit test.

If the test score is lower than the "automatic" rating, a "strict" RAS is applied – the student's previous rating is canceled and they receive a grade based on the results of the test.

Students who have scored less than 60 points in the educational component over two semesters are required to take the test.

Structure of the test:

Test task No. 1 (listening comprehension).
Maximum number of points – 10, each question – 2 points. Test tasks No. 2, No. 3 (reading).
Maximum number of points – 20, each question – 2 points. Test task No. 4 (vocabulary).
Maximum number of points – 10, each question – 1 point. Test task No. 5 (grammar knowledge).
Maximum number of points – 20, each question – 1 point.
Test task No. 6 (writing). Maximum number of points – 10.
Test task No. 7 (monologue and dialogue speech). Maximum number of points – 30.

Grading scale:
95–100 points: "excellent" 85–94 points "very good" 75–84 points "good"
65–74 points "satisfactory"
60–64 points: "sufficient" Less than 60 points: "unsatisfactory"

The conversion of rating scores from the educational component for entry into the transcript is carried out in accordance with the table:

Table of correspondence between rating points and grades on the university scale:

Number of points	Grade
100-95	Excellent
94	Very good
84	Good
74-65	Satisfactory
64-60	Sufficient
Less than 60	Unsatisfactory

9. Additional information on the discipline

Recognition of learning outcomes obtained in non-formal/informal education, in particular international foreign language certificates at level B2 and above (a list of recommended international tests of English as a foreign language is provided in Appendix 1 to Order No. 13 of the Ministry of Education and Science of Ukraine dated 14.01.2016, see http://old.mon.gov.ua/files/normative/2016-03-04/5162/nmo-13.pdf), is regulated by the relevant

"Regulations on the recognition of learning outcomes acquired in non-formal/informal education at Igor Sikorsky Kyiv Polytechnic Institute" (https://osvita.kpi.ua/node/179).

To validate learning outcomes, a subject committee is created by order of the dean of the faculty, which includes: the head of the department; a scientific and pedagogical worker responsible for the educational component proposed for enrollment; a scientific and pedagogical worker of the department of the technical faculty/institute, as a rule, the curator of the applicant's academic group or his/her scientific supervisor. The subject committee reviews the submitted documents, analyzes their compliance with the syllabus (work program of the academic discipline/educational component), interviews the applicant (if necessary), and makes one of the following decisions:

1. recognize the results obtained during informal education and count them as a semester assessment in the relevant academic discipline/educational component;
2. recognize the results obtained during informal education and credit them in accordance with the rating assessment system as a current assessment in the relevant academic discipline/educational component in the amount of no more than 15 points per academic year;
3. not to recognize the results obtained during non-formal/informal education;
4. set a date for an extraordinary assessment, in accordance with the curriculum for the academic discipline/educational component, which may be credited.

Inclusive education. The educational component may be taught to most students with special educational needs who are unable to perform tasks using peRASnal computers, laptops, and/or other technical means. For more information on ensuring the inclusiveness of education at Igor Sikorsky KPI, please visit https://osvita.kpi.ua/node/172.

Working program of the academic discipline (syllabus):

Compiled by Associate Professor of the Department of AMTS No. 1 Pavlenko O.V.

Approved by the AMTS Department No. 1 (Minutes No. 11 dated June 3, 2024)

Approved by the AMTS Department No. 2 (Minutes No. 14 dated May 29, 2024)

Approved by the AMGS Department No. 3 (Minutes No. 12 dated June 12, 2024)

Approved by the Methodological Commission of the Faculty of Linguistics (Minutes No. 11 of June 19, 2024)

Approved by the Methodological Council of Igor Sikorsky KPI (Minutes No. 8 of June 20 2024)