**Foreign Language (Vocational) Course Syllabus**

**2022-2023 academic year**

**Spring semester**

**Al-Farabi Kazakh National University**

**Majors**: 7M01501 – Physics

7M01507 Physics profiled

7M05310 – Physics and Astronomy

7M07124 – Solar energy

7M06201 – Radio engineering, Electronics and Telecommunications

7M07112 – Electric power industry

7M07125 – Electronics and control systems

**School of Physics and Technology**

**Course:** Foreign Language (Vocational)

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| **Course code** | **Course name**  | **Self-Study hours** |  **Contact hours** | **Credits**  | **SIW under teachers’ mentoring**  |
| **Lectures**  | **Practical lessons** | **Laboratory**  |
|  IYа(p) 5201 | Foreign language (Vocational) | 98 |  | 45 | - | 5 | 7 |
| **Course Introduction** |
| **Teaching Format**  | **Teaching Modes**  | **Lecture Style** | **Teaching Methods and Approaches**  | **Final Control Form** |
| offline | practical  | - | Student-centred, communicative, cognitive, reflective  | Examination  |
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| **COURSE DESCRIPTION** |

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| **Course Objectives** | **Learning outcomes (LO)****After completing the Course, students will be able to:** | **LO achievement indicators (AI)****(at least two indicators for each)** |
| Developing students’ in documentary studies a conceptual business picture of the world and professional competence in spoken and written business English communication. - master a certain minimum of lexical units of professional terminology according to the profile of the direction of training, the equivalents of the main words and expressions of professional communication in English;- master the skills of perception, recognition and understanding of English terms presented in their authentic environment;- promote the formation of skills of active operation with acquired information about the professionally-oriented specifics of terminologies in English. | Ability to communicate in written and spoken forms in English to solve problems of interpersonal and intercultural interaction (OK-5)LO 1. Speaking:apply the professional vocabulary and terminology necessary for effective communication in a professional environment within your speciality;to think creatively;be creative in solving new problems and situations;independently prepare and make oral presentations on professional topics, including multimedia technologies. | AI 1.1 use of the linguistic norms of the English language (pronunciation, graphic, grammatical, lexical);AI 1.2 use of speech etiquette formulas in the field of interpersonal, intercultural and professional communication in English;AI 1.3 use of the leading foreign language terminology of professional speech;AI 1.4 carrying out high-quality spoken communication in the modern multicultural space;  |
| LO 2. Reading:To read and translate authentic texts on a speciality English language into the native language using the dictionary;to extract the necessary information from English-language sources created in various sign systems (text, table, graph, chart, audio-visual number, etc.) in typical situations of professional and business communication;recognise oral and written statements of important information, and use basic grammatical units, characteristic of technical speech. | AI 2.1 reading English literature on the field of study to search for information from foreign sources;AI 2.2 recognition of business documentation in English (read and understand documents and related materials in English);AI 2.3 viewing, searching, studying and introductory types of reading; AI 2.4 searching for particular information in the field of professional activity in English from foreign sources, etc. |
| LO 3. Writing:prepare written texts of an informative nature (communication, report, review, scientific and technical documentation);abstract of texts on the speciality profile, essays of undergraduates on research topics;correctly and logically formalise your thoughts in writing. IT 3.2 annotate the literature on the speciality in English to obtain professional information;IT 3.3 perform written translation of texts in the speciality;IT 3.4 ask questions about texts;IT 3.5 access to professional dictionaries. | AI 3.1 use of norms and forms of official business written communication, international and national standards of types and varieties of official documents; AI 3.2 application of functional styles and features of their interaction in English in the field of intercultural and professional communication;AI 3.3 abstracting and annotating literature in the field of training; AI 3.4 possession of a set of actions for business communication and correspondence in English, considering the rules and traditions of the target language, etc. |
| LO 4. Listening:Understand the authentic speech of a General, professional, and scientific nature by ear. | AI 4.1 recognition of literary norms of the language and methods of spoken communication in English;AI 4.2 extracting information from the listened foreign language text;AI 4.3 recognition of foreign-language special terms and phrases related to the acquired profession in a foreign-language text in the field of training, etc.  |
| **ОН 5**. Prepare presentation material, and a project on the topics studied. | AI 5.1 create projects on the studied topics;AI 5.2 present your presentation and communicate your ideas to others. |
| **Prerequisites** | To study the discipline of Foreign language (professional), a master's student must know the volume of grammatical and lexical material passed in the field "Foreign language" in the 1st year, as well as in the discipline "Professionally oriented foreign language" in the 2nd year. |
| **Post requisites** | specialized courses in English |
| **Literature & resources**  | **Оқу әдебиеттері:**1. Learn the English of physics. Safronenko O., Grushko E., Petrosyan K.2014. (pdf version: http://visualtests.englishforsciences.sfedu.ru/pdf/book.pdf) **basic** 2. English for physicists. Л.Е. Страутман, Ш.Б. Гумарова, Б.К. Исабаева, А.А. Нурмухамбетова А.А. “Қазақ Университеті”, Алматы. 2017.4. Step up to IELTS. Vanessa Jakeman, Clare Mcdowell. Cambridge University Press, 2011, p. 141 5. Mark Ibbotson. Professional English in Use. Cambridge University Press, 2011, p. 144 (физики, химики)6. IELTS 13. Cambridge University Press, 2019. p. 176 (химики, физики)7. Longman Business Correspondence: A Guide to Everyday Writing. (pdf version: <http://ngoaingu.vimaru.edu.vn/wp-content/uploads/documents/Business_Correspondence_A_Guide_to_Everyday_Writing_2002.pdf>)**Интернет-ресурсы (физики)**<https://www.britannica.com/browse/Science> <https://physicsworld.com> <https://www.physicsclassroom.com> <https://www.niftyword.com/idioms-phrases/physic/>  |

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| **Academic behaviour and ethics policy** | **Academic**. Maintain a high level of academic integrity. Plagiarism and other forms of cheating, including passing the exam for another student, are not allowed. Cheating is defined as giving or receiving aid on any individual assignment, whether home assignments or during an exam. If a student cheats on another student, both students will receive a zero that neither student can make up.**Behaviour**. Workplace etiquette is synonymous with positive classroom behaviour. Students will be expected to conform to University expectations of student behaviour. Infractions for disruptions (excessive talking, sleeping, cell phone use, profanity, etc.) will follow the Student Code of Conduct guidelines. 1st infraction will be a warning, 2nd the infraction will be a written report to the Dean's Office. No exceptions and no excuses will be made. The usage of cell phones/mobile devices may lead to confiscation.Students with disabilities can receive counselling at the e-mail address perizat\_fmo@mail.ru. |
| **Evaluation and Assessment Policy** | All deadlines must be met on time, and all assignments and tests must be completed on time. LATE WORK WILL NOT BE ACCEPTED. The Academic calendar holds mid-Term and Final controls of students’ knowledge.Criteria-based assessment: evaluation of learning outcomes about descriptors.Summative evaluation: evaluating the activities in the classrooms. |

**COURSE PLAN**

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| **Week** | **Content**  | **Hours**  | **Scores**  |
| 1 | **Unit 1. Introduction to** **Physics****Reading:** Why Study Physics?**Listening**: Why do we study Physics? (https://www.youtube.com/watch?v=yIIPjKjtLUs)**Grammar & vocabulary:** Revision of Simple Tenses (Present, Past& Future)**Writing:** Taking notes**Speaking:** Discuss Peculiarities of Physics. Why is Physics important to study? | 3  | **5** |
| **Homework:** Taking notes on main idea and major details of the Text 1 of the Unit.  | 5 |
| 2 | **Unit 1. Introduction to** **Physics****Reading**: Student Profile: Michael Smith**Grammar & vocabulary:** word formation. Terms & General Science Words**Writing:** Student Profile**Speaking:** Talk about the most effective features of the physics inventions.  | 3  | 5 |
| **Homework:** write your personal Physics Student Profile in 150-200 words. Make use of the guidelines. | 5 |
| 3 | **Unit 2.** Building on Historic Success**Reading**: Building on Historic Success**Listening**: What is Physics? Inspiration. (https://www.youtube.com/watch?v=HuZZpJJF71U)**Grammar** **& vocabulary**: word patterns and collocations. **Writing**: Summary writing (Planning & Structuring)**Speaking**: discuss “What exactly is a great invention and how it works?” | **3** | **5** |
| **Homework:** Find information about a physicist who you really admire. Write a report on his/her unpopular invention that changed the world later. Explain why the invention was unpopular. Write in 150-200 words. Make use of the guidelines. | 15 |
| 4 | **Unit 3.** Building on Historic Success (cont.)**Reading**: Prominent Physicists**Listening**: How did newton invented calculus. Isaac Newton documentary. (https://www.youtube.com/watch?v=RZ1Extuvcsw)**Grammar & vocabulary**: Participle. Terms & General Science Words**Writing**: Report writing**Speaking**: talk about some famous physicists and their the most outstanding accomplishments in the science.  | **3** | **5** |
| **SSW Case 1. Complete one of the suggested assignments.** 1. Project Work **“Welcome to KAZNU PHYZTECH”.** Any university looks for efficient ways to encourage more school-leavers to apply to its faculties. The faculty of physics at your university has decided to **create a video** clip for its website. The faculty students are invited to participate and shoot a film about each department of the faculty.Work in **small group** of 3-4.Decide on the department you would like to make your film about. Make sure you include information about: the significance of this field of physics a brief the history & academic traditions of the department major research trends, leading scientists & their achievements degree programmes & learning facilities career outlook for the graduates in this field. ------------------------------------------------------------------------------------------2. **On you own**, prepare a report on “Famous Physicists and their Accomplishments”. Follow these guidelines: Think of at least three outstanding physicists who are not mentioned in this unit. Search the Internet to find some information about these scientists. Make notes of their most significant achievements. Explain whether these significant achievements bring peace and glory to the world. Submit your finding in the form of PPP (max twelve slides). | 5 |
| 5 | **Unit 3.** In the Lab **Reading**: The Laboratory**Listening**: Physics lab class where students design the experiments. (https://www.youtube.com/watch?v=LkeyjLeDqvY)**Grammar** **& vocabulary**: Modal verbs. International words vs. “False friends”**Writing**: Writing a lab report**Speaking:** Talk about Physics lab class where you design the experiments | 3 | **5** |
| **Homework:** Make a video about yourexperiment(s) in Physics lab class. Explain why you do this experiment, how it works, and what safety rules you have to keep to when you work in a lab.  | 5 |
| 6 | **Unit 4.** Endless Universe**Reading**: Endless Universe**Listening**: What makes the Earth suitable for life (https://www.youtube.com/watch?v=6Ihbuy5g84g)**Grammar** **& vocabulary**: 0 &1 Conditionals. Terms & General Science Words.**Writing**: Summary writing**Speaking:** Talk about important discoveries in the study of the Universe. Explain their basic principles and services. | **3** | **5** |
| **SSW 2: Complete one of the suggested assignments.** 1. Project Work **“Advanced devices that change the world”.** Work in **small group** of 3-4. Search the Internet to find information about one of the most advanced devices or tools used in modern physics. Write a brief description of these devices/tools. Make sure to include the information about its parts and components, operation and application: what tool/device is used for the way it operates its size, parts and components areas of its applicationIf some of those are available, design your experiment and record it. Describe how your experiment goes and what the results are. Present your finding in PPP (at least fifteen slides) for max 5-7 min.**-----------------------------**2. **On you own**, read some of the lab safety instructions. Analise and sort out the things you *should do* and *shouldn’t do* when working in the lab and prepare **Instruction** the heading ‘**The Do’s and Don’ts of Working in a Physics Laboratory’.**  | **15** |
| 7 | **Mid-term Control 1****Speaking:** Presentation of merged SSW 1&2 assignments.**Writing:** areview of the given text. |  | **20** |
|  **Module 1** |  | **100** |
| 8 | **Unit 5.** Cutting Edge Physics**Reading**: The Advances and Breakthroughs of 20th - Century Physics**Listening**: Top 10 Inventions of All Time (https://www.youtube.com/watch?v=bNUfZ3\_VkuE)**Grammar** **& vocabulary**: Complex Subject & Complex noun phrases.**Writing**: Opinion essay writing. **Speaking:** Talk about the breakthroughs of the 20th century physics. Discuss what changes they have brought about. Which breakthroughs laid the foundations of the ‘new era’ in physics? | **3** | **5** |
| **Homework:** Write an essay title and its plan on the issue of the breakthroughs of the 20th century in physics you think is still important | **5** |
| 9 | **Unit 5.** Cutting Edge Physics (cont.)**Reading**: web links for physicists **Grammar** **& vocabulary**: Dependent prepositions & descriptive adjectives.**Writing**: Opinion essay writing. **Speaking:** Talk aboutCutting Edge Research in the 21st Century Physics”. Name how many Nobel Prize winners among them.  | **3** | **5** |
| **Homework:** Write your final essay of the Lesson 8 Homework.  | **5** |
| 10 | **Unit 6.** Nanoworld**Reading**: How small is small? **Listening**: What is nanotechnology? (https://www.youtube.com/watch?v=DAOFpgocfrg)**Grammar** **& vocabulary**: Prefixes. International Terms & General Science Words **Writing**: Opinion essay writing**Speaking:** Talk about why nanotechnology attracted so much attention in recent years and how nanotechnology will change our life in future. | **3** | **5** |
| **Homework:** Write an essay on ‘What dangers or risks connected with nanotechnology can you predict?’ | **5** |
| 11 | **Unit 7.** Nanoworld (cont)**Reading**: The Hype and Hope of Nanotechnology**Listening**: Top 5 Nanotechnology Revolution Facts (https://www.youtube.com/watch?v=FeHwdyvvJ-w)**Grammar** **& vocabulary**: Prefixes. International Terms & General Science Words**Writing**: Summary writing practice **Speaking:** Talk about what dangers or risks connected with nanotechnology you can predict. | **3** | **5** |
| **SSW 3: Complete one of the suggested assignments.** Project Work **“What makes the Earth suitable for life”.** Work in **small group** of 3-4. Search the Internet and/or popular science magazines to find out more about current studies of the Universe. Choose the one you find most interesting and make a PowerPoint presentation about it. Use these questions as the guidelines. What is being investigated? Who is doing the research? How long has it been under way? What is the purpose and the novelty of the research? Are there any opponents of that experiment?Your PPP is at least fifteen slides for max 5-7 min.**--------------------------------**2. **On you own**, search the Internet and/or popular science books and magazines for more information on the potential benefits and possible risks of nanotechnology. Prepare PPP with your search finding with max 7 slides for 4-5 min. | **10** |
| 12 | **Unit 8.** Physics & other Sciences **Reading**: At the junction of sciences **Grammar** **& vocabulary**: word patterns and collocations. Idioms **Writing**: a survey report.**Speaking:** Talk about Employee Management & Recordkeeping | **3** | **5** |
| **Homework:** Write a report on one of your last surveys.  | **5** |
| 13 | **Unit 8.** Physics & other Sciences (cont)**Reading**: Realizing Benefits from Interdisciplinary Research. **Listening:** Science Inventions that Are on Another Level (https://www.youtube.com/watch?v=588vIeynWFw)**Grammar** **& vocabulary**: Terms & General Science Words**Writing**: a survey report. **Speaking:** Talk about Realizing Benefits from Interdisciplinary Research | **3** | **5** |
| **Homework:** Search the YouTube for experiments in physics. Write a survey report on that experiment. Highlight its interdisciplinary approach.  | **5** |
| 14 | **Unit 10.** A Job for a Physicist**Reading**: Image Scientist.**Listening**: Ask me ... about jobs in physics. (https://www.youtube.com/watch?v=kURHD8HqkpM) **Grammar** **& vocabulary**: Describing trends**Writing**: CV writing**Speaking:** Discuss the qualities of good leadership | **3** | **5** |
| **SSW4: Complete one of the suggested assignments.****Project Work.** Work in groups of three-four. 1. Analyse the information about several interdisciplinary departments of KazNU University with majors in physics. Summarize this information as a poster.Using your group poster **conduct a survey** to find out which interdisciplinary fields attract your respondents most (undergraduate, graduate or postgraduate students). Note down the reasons they give in favour of a *particular field* and the *most interesting comments*.Present your survey results in a bar chart.Write a group **Survey Report** on the results of your survey. Present your report in PPP with max 10 slides for 5-7 min. -----------------------------------------------------------------------------------------------------2. Search the Internet site and/or prospectus of one of the universities with physics faculty. Collect information about several interdisciplinary departments at your faculty/university. Choose the one that is most interesting for you and find information about: the date of its foundation and the leading researchers the major areas of current research, scientific objectives and accomplishments the facilities of the department (laboratories, equipment, research schools and traditions, etc.)Present your survey results in PPP with max 10 slides for 5-7 min. | **10** |
| **15** | **Mid-term Control 2****Speaking:** Presentation of merged SSW 3&4 assignments**Writing:** areview of the given text. | **3** | **20** |
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| **Module 2**  |  | **100** |
| **Examination**  |  | **100** |

**Dean \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Head of the Department \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Instructor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**