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

Translational Medical Bioengineering

Human anatomy and physiology. Part 1. Fundamentals of biomedical knowledge. Medical terminology

Working program of basic discipline (Syllabus)

Requisites for basic discipline	
Level of higher education	***First (bachelor's)***
Field of knowledge	***16 Chemical and Bioengineering***
Specialty	***163 Biomedical Engineering***
Educational program	***Medical engineering***
Discipline status	***Normative discipline***
Form of study	***full-time / day / mixed / remote***
Year of preparation, semester	***1th course, autumn semester***
Course volume	***4 ECTS credits / 120 hours***
Semester control / Control measures	***Test / modular test / essay***
Lessons schedule	***18 lecture hours and 36 hours of practical classes***
Language of instruction	***English, Ukrainian***
Information about course leader / teachers	***Lecturer: Associate Professor, Bespalova Olena*** http://bi.fbmi.kpi.ua/uk/bespalovaua/, o.bespalova@kpi.ua ***Practical: Associate Professor, Bespalova Olena*** http://bi.fbmi.kpi.ua/uk/bespalovaua/, o.bespalova@kpi.ua
Course placement	*https://do.ipo.kpi.ua*

Program educational disciplines

1. Description of the discipline, its purpose, subject of study and learning outcomes

The academic discipline "Human Anatomy and Physiology. Part -1. Fundamentals of Biomedical Knowledge. Medical Terminology" studies the structure and system of special concepts and terms that form its basis. The main task is to form the professional and terminological competence of students, focused on the study of the medical terminological system.

Modern medical terminology is an extremely broad and complex system of terms. It includes several hundred thousand words and phrases. The specificity of medical terminology lies in the centuries-old use of the Latin language and terms in the professional activities of not only medical specialists, but also scientists of all fields of knowledge. Medical terminology is a complex concept that includes: anatomical-histological, clinical and medical-technical terminology. Medical-technical terms, especially the names of instruments, devices and apparatus, received their names from Latin and Greek words. Knowledge of medical terminology will prepare specialists to participate in the creation, design and engineering maintenance of biological and medical devices and systems.

Why can you learn?

Knowledge:

- regarding the modern classification of medical terminology, the structure and system of special concepts and terms, namely: anatomical-histological, clinical and medical-technical terms, especially the names of instruments, devices and apparatuses;
- the main ways of word formation in medical terminology using Latin and Greek term elements, the use of Greek-Latin doublets and term elements to denote functional and pathological conditions, medical and technical terminology;
- main groups of terms-composites according to structural and morphological features, terms for designating anatomical concepts that indicate the place, space of location, introduction of something within the limits of what the derived base names.

Skill:

- use the principles of forming anatomical-histological, clinical, medical-technical terms and use medical terminology in professional communication**;**
- use medical terms with Greek and Latin term elements to designate pathological conditions, type of surgical intervention, method of examination or treatment;
- use medical terminology in the creation, design, and engineering maintenance of biological and medical devices and systems.

How can you use the acquired knowledge and skills?

The acquired knowledge and skills are an important tool in conducting research and organizational and production work in the field of biomedical engineering.

Program competencies that must be formed after studying the discipline and that correspond to the educational program "Medical Engineering":

General competencies (EP put into effect by the Order of the Rector NON/434/2024 dated June 10, 2024)

GC **– 02** Knowledge and understanding of the subject area and understanding

Special (professional) competencies (EP put into effect by the Order of the Rector NON/434/2024 dated June 10, 2024):

PC **- 09-** Ability to identify, formulate, and solve engineering problems related to the interaction between living and non-living systems

The program learning outcomes after studying the discipline " Human Anatomy and Physiology. Part 1. Fundamentals of Biomedical Knowledge. Medical Terminology *" are (EP put into effect by the Order of the Rector NON/434/2024 dated June 10, 2024):*

PLO **- 18-** Understanding of fundamental-applied, medical-physical, and physico-chemical principles governing the functioning of biological objects, as well as bioengineering fundamentals of technologies and equipment for researching human body processes

PLO **- 22-** Knowledge of general principles and structure of complex biological systems, including the human body and its functions from the perspective of a systemic approach and their utilization in biomedical engineering, as well as basic methods and tools used for quantitative assessment of physiological system functioning

2. Prerequisites and postrequisites of the discipline (place in the structural and logical scheme of education according to the relevant educational program)

The study of the discipline "Human Anatomy and Physiology-1. Fundamentals of Biomedical Knowledge. Medical Terminology" is preceded by mastering the academic disciplines: anatomy, biology.

The academic discipline belongs to the cycle of normative academic disciplines, according to the structural and logical scheme of the specialist training program, the discipline "Human Anatomy and Physiology-1. Fundamentals of Biomedical Knowledge. Medical Terminology" is closely related to the discipline of general training: "Human Anatomy and Physiology-2. Fundamentals of Human Anatomy and Physiology."

3. Content of the academic discipline

Human Anatomy and Physiology. Part 1. Fundamentals of Biomedical Knowledge. Medical Terminology

Lecture topics*:*

1. History of medical terminology. The origin and lexical composition of medical terminology for understanding the patterns of functioning of biological objects, and bioengineering foundations of technologies and equipment and research of processes of the human body.
2. Ukrainian medical terminology of biological objects, and bioengineering fundamentals of technologies and equipment for studying the processes of the human body. Methods of creating medical terms. Suffix, prefix way of creating medical terms.
3. Basic and word formation, and syntactic method of forming a medical term from a word combination to denote biological objects, and bioengineering basics of technologies and equipment for studying processes of the human body.
4. Terminology as a component of medical terminology. Clinical terminologies of the structure of complex biological systems, including the human body.
5. Complex clinical terms of biological systems, including the human body. Initial and final term elements.
6. Word formation in clinical terminology from the standpoint of a systems approach and their use in biomedical engineering, as well as the main methods and tools used to quantitatively assess the functioning of physiological systems. Medical and technical terminology.
7. Terms for organ systems, biological objects, and bioengineering fundamentals of technologies and equipment for studying processes in the human body. Structure of anatomical terms.
8. General information and principles of the structure of terms for designating the structure of complex biological systems, including the human body: tissues, musculoskeletal system, nervous system and sensory organs. Terms for designating function from the standpoint of a systems approach and their use in biomedical engineering, as well as the main methods and tools used to quantitatively assess the functioning of physiological systems.
9. Anatomical terminology of the cardiovascular, digestive, respiratory, and excretory systems and understanding of the bioengineering fundamentals of technologies and equipment for studying human body processes.

4. Training materials and resources

Basic literature:

1. Медична термінологія. Навчальний посібник для самостійної роботи студентів з кредитного модуля дисципліни «Анатомія та фізіологія людини-1. Основи біомедичних знань. Медична термінологія» для здобувачів ступеня бакалавра спеціальності 163 «Біомедична інженерія» [Електронний ресурс]: навчальний посібник для студ. спеціальності 163 «Біомедична інженерія» / КПІ ім. Ігоря Сікорського: уклад. О.Я. Беспалова. - Електронні текстові дані (1 файл: 368 Кбайт). – Київ : КПІ ім. Ігоря Сікорського, 2021. – 61 с.
2. Основи анатомії та фізіології людини: Навчальний посібник для практичних робіт з кредитного модуля дисципліни «Анатомія та фізіологія людини-2. Основи анатомії та фізіології людини» для здобувачів ступеня бакалавра спеціальності 163 «Біомедична інженерія» [Електронний ресурс]: навчальний посібник для студ. спеціальності 163 «Біомедична інженерія» / КПІ ім. Ігоря

Сікорського: уклад. О.Я. Беспалова. – Київ : КПІ ім. Ігоря Сікорського, 2021. – 63 с. https://ela.kpi.ua/handle/123456789/42125
3. Куліченко А.К. Латинська мова та медична термінологія. Ч.II : Клінічна термінологія : практикум для студ.-іноз. гром. I курсу мед. ф-тів / авт.-уклад. А.К. Куліченко, Ю.С. Скрипник, І.О. Хітрова. – 2-ге вид., доопрац. і доповн. – Запоріжжя : ЗДМУ, 2018. – 81 с.
4. Дерев'янченко Н. В., Литовська О. В. Латинська мова та медична термінологія: навчальний посібник (для студентів вищих мед. навч. закладів) / Н. В. Дерев'янченко, О. В. Литовська. – Харків : ХНМУ, 2017. – 172 с.
5. Анатомія людини. Модуль 1 : навч.-метод. посібник (для самостійної роботи студентів медичних факультетів спеціальності «Стоматологія» / М. А. Волошин, О. В. Артюх, Т. М. Матвєйшина [та ін.]. – Запоріжжя : ЗДМУ, - 2017. – 75 с.

Additional literature:

1. Латинська мова та основи фармацевтичної термінології : навч. посіб. для самост. роботи студ. I курсу фармац. ф-тів (7.12020104 – Технології парфумерно-косметичних засобів) / [уклад. Т. В. Тітієвська, А. К. Куліченко]. – Запоріжжя : ЗДМУ, 2015. – 102 с.

2. Латинська мова : практикум для студ.-іноз. гром. I курсу мед. та фарм. ф-тів / авт.-уклад. А.К. Куліченко, Ю.С. Скрипник, І.О. Хітрова. – 2-ге вид., доопрац. і доповн. – Запоріжжя : ЗДМУ, 2018. – 96 с.

Educational content

5. Methods of mastering the discipline (educational component)

№ s/n	Lecture topics	Program learning outcomes	Main tasks	
			Control measure	Term implementation
1.	History of medical terminology. The origin and lexical composition of medical terminology for understanding the patterns of functioning of biological objects, and bioengineering foundations of technologies and equipment and research of processes of the human body.	PLO *18*	Practical work *1,2*	1-2-nd week
2.	Ukrainian medical terminology of biological objects, and bioengineering fundamentals of technologies and equipment for studying the processes of the human body. Methods of creating medical terms. Suffix, prefix way of creating medical terms.	PLO *18*	Practical work *3,4*	*3-4*--nd week
3.	Basic and word formation, and syntactic method of forming a medical term from a word combination to denote biological objects, and bioengineering basics of technologies and equipment for studying processes of the human body.	PLO *18*	Practical work *5,6*	*5-6*--nd week
4.	Terminology as a component of medical terminology. Clinical terminologies of the structure of complex biological systems, including the human body	PLO *22*	Practical work *7,8*	*7-8*-nd week
5.	Complex clinical terms of biological systems,	PLO *22*	Practical work *9,10*	*9-10*--nd week

№ s/n	Lecture topics	Program learning outcomes	Main tasks	
			Control measure	Term implementation
	including the human body. Initial and final term elements.			
6.	Word formation in clinical terminology from the standpoint of a systems approach and their use in biomedical engineering, as well as the main methods and tools used to quantitatively assess the functioning of physiological systems. Medical and technical terminology.	PLO *22*	Practical work *11,12*	*11-12*-nd week
7.	Terms for organ systems, biological objects, and bioengineering fundamentals of technologies and equipment for studying processes in the human body. Structure of anatomical terms.	PLO *18*	Practical work *13-14*	*13-14*--nd week
8.	General information and principles of the structure of terms for designating the structure of complex biological systems, including the human body: tissues, musculoskeletal system, nervous system and sensory organs. Terms for designating function from the standpoint of a systems approach and their use in biomedical engineering, as well as the main methods and tools used to quantitatively assess the functioning of physiological systems.	PLO *22*	Practical work *15*	*15*--nd week
9.	Anatomical terminology of the cardiovascular, digestive, respiratory, and excretory systems and understanding of the bioengineering fundamentals of technologies and equipment for studying human body processes.	PLO *18*	Practical work *16*	*16*- -nd week
10.	Modular test work		Practical work *17*	*17*- -nd week
11.	Credit work		Practical work *18*	*18*--nd week

Topics of practical classes***:***

- Main groups of medical terms.
  The place of Latin words in scientific terminology. Anatomical and histological terminology, clinical, pharmaceutical terminology.
  Suffix method of creating medical terms.
  Formation of medical terms by suffix method to denote anatomical concepts, organs, drugs, chemical compounds.
- Prefix and prefix-suffix method of formation in clinical terminology.
  Prefixes to denote antonymic (opposite) concepts, to denote the intensity of a feature, or the incompleteness of a feature.
- Greco-Latin term-forming elements in clinical terminology.
  Greek and Latin prefixes, root and terminal term elements. Term elements denoting a pathological state of the organism.
- Formation of medical terms based on the name of the disease object.
  Terminological element -ōsis in terms, meaning "disease, pathological condition". Features of the use and translation of terms with Greek and Latin prefixes.
- Clinical terms.
  Names of common diseases, disorders of the body that affect a particular anatomical organ or system.

- Formation of terms by stemming.
  Greco-Latin doublets for the designation of organs and tissues. Characteristics of composite terms by structural and morphological features. Term elements associated with the morphological and anatomical system
- Axes and planes passing through the body.
  The location of body parts and organs. The terms medial and lateral, ventral and dorsal, cranial and caudal, proximal and distal.
- Construction of anatomical terms using the example of agreed and disagreed definitions.
  Terms for designating areas of the human body, organs and their parts, terms describing the positions of the main parts of the body.
- Terms for designating body tissues.
  General characteristics and classification of tissues.
- Anatomical terminology and structure of the musculoskeletal system.
  Basic terms of the structure and function of the musculoskeletal system. Terms of the structure and function of the bone.
- Anatomical terminology and structure of the nervous system of the human body. *Anatomical terms of the nervous system. Anatomical terminology of the central nervous system*
- Anatomical terminology and structure of the sense organs.
  Anatomical terminology of the sense organs: organ of vision, organ of hearing. Structure and departments of the organ of vision.
- Anatomical terminology and structure of the cardiovascular and lymphatic systems. *Anatomical terminology of the structure of the heart, heart chambers. Anatomical terms of the structure of the heart wall, coronary arteries*
- Anatomical terminology and structure of the digestive system.
  Anatomical terminology of the digestive system: organs of the digestive tract their anatomical terminology
- Anatomical terminology and structure of the respiratory system.
  Anatomical terminology and structure of the urinary system.
- Modular test work
- Final work

6. Independent work student

The total amount of independent work within the discipline is 66 hours, including:

- preparation for practical classes – 40 hours;
- preparation for the modular test (MKR) – 6 hours;
- preparation for abstract work 10 hours;
- preparation for the test -10 hours

One of the main types of semester control during the mastering of the academic discipline "Human Anatomy and Physiology. Part 1. Fundamentals of Biomedical Knowledge. Medical Terminology" is the performance of an abstract work.

The main goal of the essay is to deepen and expand students' theoretical knowledge on individual topics of the academic discipline, to gain experience in independent work with educational and scientific literature.

The abstract is completed according to the requirements within the deadline specified by the teacher.

Approximate topic of the abstract work:

1. Main groups of medical terms and their use in biomedical engineering.
2. Clinical terms and their use in biomedical engineering,
3. Basic ways of creating medical terms.

4. Medical and technical terms used to quantify the functioning of physiological systems.
5. Terms for organ systems, biological objects.
6. Terms for bioengineering fundamentals of technologies and equipment for studying processes in the human body.
7. Terms used to quantify the functioning of physiological systems.

The title page of the abstract should have the following content: name of the university; name of the faculty; name of the department; name of the academic discipline; topic of the abstract; level of higher education, name of the specialty, name of the educational and professional program, surname and first name of the student, course, academic group number, year.

The title page is followed by a detailed plan (table of contents) of the abstract, which should include the introduction, sections of the main content, their subdivisions (if necessary), conclusion, and a list of sources used. The table of contents indicates the page numbers of the beginning of each structural element on the right.

The introduction justifies the relevance of the chosen topic, assesses the state of research on the problem, formulates the goal and defines the tasks of the essay, and provides a brief overview of the available literature and sources used.

The main part includes an analytical review of modern sources (at least 5) and a generalization of information on a given topic.

The abstract is written in an impersonal style (considered, analyzed, proven, etc.). The presentation of the material should be clear, specific, and accompanied by the necessary explanations with references to sources of information

References should be indicated by a sequential number following the list of sources used in square brackets, for example, "…in the collection of tasks [3, p.34]...».

The conclusion should cover the following aspects:

− assess the degree of achievement of the goal and fulfillment of the tasks of the work;
− list and briefly describe known approaches to the problem under consideration;
− highlight new aspects that are subject to further study;
− determine what is valuable in the abstracted works and requires additional analysis.

The list of sources used is drawn up in accordance with current rules. If the information is taken from the Internet, it is necessary, as for ordinary literature, to indicate the author, the title of the article, and then provide the website address.

The abstract must be printed on a standard A4 sheet of paper, observing the following requirements: left margin – 30 mm, right – 15 mm, top – 20 mm, bottom – 20 mm; Times New Roman font size 14 pt; line spacing – 1.5; red line indentation – 1.25; text alignment – widthwise.

There are no requirements for the length of the abstract. The length should be such that it fully reveals the essence of the topic and contains all the necessary structural elements. It is recommended to be no less than 10 and no more than 25 pages.

Each structural element of the work's content begins on a new page. The names of structural elements should be placed in the center of the line without a period at the end, without underlining, separated from the text by three line spacings. Hyphenation in words is not used. Figures and tables should have headings and numbering consistent with the section number.

The abstract is evaluated according to the following criteria:

− Relevance to the chosen topic;

− Quality of design and presence of all necessary structural elements;

− Originality of the submitted material;

− Degree of mastery of the theoretical material presented in the abstract.

The deadline for submitting an essay for evaluation is the 14th week of study.

Essays are not checked for plagiarism, but must meet the requirements of academic integrity. If academic dishonesty is detected, the work will not be credited.

Policy and control

7. Policy educational disciplines (educational component)

Violation of task deadlines and incentive points

Applicants may be awarded incentive points. The total amount of incentive points cannot exceed 5 points.

Incentive points are awarded for the following activities:

- participation in international or all-Ukrainian scientific conferences, congresses, etc. (on the subject of the academic discipline) (subject to publication of abstracts) (5 points;

Attending classes

No penalty points are awarded for absence from classes. However, applicants are encouraged to attend classes, as they teach theoretical material and develop practical skills necessary for the thorough formation of relevant competencies.

The assessment system is focused on receiving points for student activity, as well as completing tasks that can develop practical skills and abilities.

Missed assessment controls

Assessment tests scheduled to be administered during class are conducted on a pre-determined day, which is announced to students during the first week of the educational process. Conducting such assessment tests on another day is permitted in cases of serious and/or force majeure circumstances.

A practical assignment submitted for verification after the deadline, but before the deadline for issuing the current certification (or test/exam), is evaluated with penalty points.

Missing express control (tests) are not processed.

The result of the module test for an applicant who did not appear for the test is zero. In this case, the applicant has the opportunity to complete the module test at another time in agreement with the teacher.

Ensuring objectivity in assessing applicants

The objectivity of assessing applicants at all stages of mastering the discipline is ensured through the following mechanisms. First, the use of test forms for assessing knowledge. Second, detailed recommendations on the rating system for assessing learning outcomes (Section 8 of the Syllabus). Third, the use by applicants and teachers of all possible communication tools that ensure the preservation of communication history (e-mail, social networks, messengers, etc.). Fourthly, in case of disagreement with the assessment results, another teacher with appropriate professional competence and appointed by the department for the current academic year may be involved in checking the written works of applicants. In the absence of a coordinated opinion of the teachers regarding the assessment of the applicant's work, the issue is brought to a meeting of the department, and the issue is resolved in accordance with the "Regulations on Appeals at Igor Sikorsky Kyiv Polytechnic Institute" http://osvita.kpi.ua/node/182.

Procedure for appealing the results of assessment control measures

After receiving comments from the teacher with arguments regarding the assessment, the applicant has the right to individually ask all questions of interest regarding the results of the assessment control measures. If the applicant disagrees with the assessment, he must also provide arguments for his position and contact the dean of the faculty for further resolution of the issue (for details, see "Regulations on Appeals at Igor Sikorsky Kyiv Polytechnic Institute" http://osvita.kpi.ua/node/182).

Academic integrity

When using copyrighted content, analytical research results, and/or other information, applicants must cite the source. 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" (https://kpi.ua/code). In the event of a need to check academic texts prepared for applicants for the presence of text borrowings, the applicant may contact the teacher or the responsible person of the department for checking academic texts.

Norms of ethical behavior

The norms of ethical behavior of applicants and employees are defined in Section 2 of the Code of Honor of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (https://kpi.ua/code).

Distance learning

Distance learning takes place through the Sikorsky Distance Learning Platform.

Online courses are provided in case of force majeure circumstances (in particular, quarantine measures) and for inclusive education of applicants with special needs.

Inclusive learning

The academic discipline is designed for students with special educational needs, but it should be taken into account that it places a heavy load on the visual apparatus. Depending on the special needs of students, distance learning may be used.

8. Types control and rating system evaluation results teaching (ERT)

Current control.

Work in practical classes involves:

- completion of practical task 1.2 weighted score – 3. The maximum number of points for completing practical task 1.2 is 2x 3 points = 6 points;
- completion of practical tasks 3,4,5,6,7,8,9 weighted score – 6. The maximum number of points for completing practical tasks 3,4,5,6,7,8,9 is 7x 6 points = 42 points;
- completing a test task containing 10 questions, each worth 0.5 points for a correct answer, is equal to 5 points. There are 5 tests x 5 points = 25 points.

Modular test work (MCW) is conducted in the form of a test, which is evaluated at 20 points.

Abstract work is evaluated at 7 points

Essay evaluation criteria

«Excellent", all work requirements met	7- points
«Good", all work requirements are met, or there are minor errors	6-5 points
«Satisfactory", there are shortcomings in fulfilling the work requirements and certain errors.	4-1 points
«Unsatisfactory", the work was not submitted or does not meet the requirements for "Satisfactory"	- 0 points

Calendar control: conducted twice a semester as a monitoring of the current status of implementation of syllabus requirements. The first calendar control involves the completion of practical work No. 1-3, test No. 1, the second calendar control involves the completion of practical work No. 4-9, test tasks No. 2-4, abstract work.
Maximum semester rating of the applicant: 100 points

The sum of the weighted points of control measures during the semester is:

R c= 6+42+25+ 20+7= 100 points.

Semester control: credit.

The conditions for admission to the test are the acceptance of the abstract paper; defense of all practical papers, writing an MCR of at least 15 points, as well as a starting rating (rc) of at least 40% of the R_C, i.e. **40** points.

In case of a semester rating of 60 points or higher, the applicant can receive a credit automatically. In case of disagreement or a rating of less than 60 points, students perform a credit test.

Table of correspondence of rating scores to university scale grades:

Number of points	Rating
100-95	*Perfect*
94-85	*Very good*
84-75	*Good*
74-65	*Satisfactorily*
64-60	*Enough*
<60	*Unsatisfactorily*
Admission conditions are not met	*Not allowed*

9. Additional information with disciplines (educational component)

Appendix 1. Program learning outcomes (extended form)
In accordance with the Order of the Ministry of Education and Science of Ukraine No. 1204 dated November 19, 2018 "On approval of the standard of higher education in the specialty 163 Biomedical Engineering" for the first bachelor's level of higher education in Appendix 1 establishes the correspondence of learning outcomes to competencies in the discipline "Human Anatomy and Physiology. Part 1. Fundamentals of Biomedical Knowledge. Medical Terminology".

Appendix 2. Questions submitted for semester control.

Correspond to the topics of lectures and practical classes. Recognition of learning outcomes acquired in non-formal/informal education is carried out in accordance with the "Temporary Regulation on the Procedure for Recognition of Learning Outcomes Acquired by Students of Igor Sikorsky Kyiv Polytechnic Institute in Non-formal/Informal Education" (https://osvita.kpi.ua/node/119).

Working program educational disciplines (syllabus):
Compiled Candidate of Biological Sciences, Bespalova O. Ya.
Approved by the Department of Translational Medical Bioengineering (protocol No. 14 from 06.06.2024)
Approved by methodical by the commission faculty BME (protocol No. 9 from 26.06.2024)

Appendix 1
to the syllabus discipline
"Human Anatomy and Physiology. Part 1.
Fundamentals of Biomedical Knowledge. Medical Terminology"

Program learning outcomes (extended form)

As a result of studying the academic discipline "Human Anatomy and Physiology. Part 1. Fundamentals of Biomedical Knowledge. Medical Terminology", students will be able to:

Learning outcomes		Relevance of learning outcomes to competencies in the educational and professional program [1]	
		General Competence (soft skills)	**Special competence (professional)**
PLO 18	Understanding of fundamental-applied, medical-physical, and physico-chemical principles governing the functioning of biological objects, as well as bioengineering fundamentals of technologies and equipment for researching human body processes	GC 2 - Knowledge and understanding of the subject area and understanding	PC 09- Ability to identify, formulate, and solve engineering problems related to the interaction between living and non-living systems -
PLO 22	Knowledge of general principles and structure of complex biological systems, including the human body and its functions from the perspective of a systemic approach and their utilization in biomedical engineering, as well as basic methods and tools used for quantitative assessment of physiological system functioning	GC 2 - Knowledge and understanding of the subject area and understanding	PC 09- Ability to identify, formulate, and solve engineering problems related to the interaction between living and non-living systems -

[1] Order of the Ministry of Education and Science of Ukraine No. 1204 dated November 19, 2018 “On approval of the standard of higher education in the specialty 163 Biomedical Engineering” for the first bachelor's level of higher education».

Appendix 2
to the syllabus discipline
"Human Anatomy and Physiology. Part 1.
Fundamentals of Biomedical Knowledge. Medical Terminology"

List of questions submitted for semester control

Topic 1. Ukrainian medical terminology

1.1 Subject and tasks of medical terminology.
1.2. What methods of word formation are used in medical terms?
1.3. Name the Latin and Greek prepositions that are most often used as prefixes.
1.4. Define a term. What is a term element?
1.5. What groups are medical terms divided into?
1.6. What terminology is called clinical?
1.7. What suffix is used to form terms for carbohydrates, names of various diseases and symptoms, mainly from Greco-Latin roots. Give examples.
1.8. What are the types of anatomical terms by structure? Give examples.
1.9. What groups are clinical terms divided into? Give examples.
1.10. Name the term elements that are most often used to name medical devices.

Topic 2. Ways of word formation in medical terminology

2.1. What are the ways of creating medical terms?
2.2. Which suffix denotes “a person who performs a certain action”?
2.3. Which suffix denotes “process, action”? Give examples.
2.4. Terminological elements denoting a pathological state of the organism.
2.5. Give examples of terms with term elements –therapia, -algia, -pathia, -tomia?
2.6. What does the suffix –ōsis-, -iāsis mean? Give examples.
2.7. Characteristics of composite terms by structural and morphological features.
2.8. How are terms formed to denote the location, presence of something between something. Give examples.
2.9. Describe the syntactic method of term formation.
2.10. Name the terms to denote areas of the human body, organs and their parts that describe the position relative to the main parts of the body