O. O. Bogomoletz Institute of Physiology

National Academy of Sciences of Ukraine

SYLLABUS OF AN EDUCATIONAL COMPONENT

PREPARATION OF SCIENTIFIC PUBLICATIONS AND GRANT PROPOSALS IN BIOMEDICAL RESEARCH

Course code: MVK33

Field	Information
Field of knowledge	I Healthcare and Social Welfare (22 Healthcare); E Natural Sciences, Mathematics and Statistics
Specialty	I2 (222) Medicine; E1 (091) Biology and Biochemistry
Level of higher education	Third cycle (educational and research level)
Educational and research programme	Medicine (Pathological Physiology); Biology and Biochemistry (Biophysics; Human and Animal Physiology; Pathological Physiology)
Status	Elective educational component from the list of specialised courses
Mode of study	Full-time/part-time
Year/semester	Year 1 / Semester 2
ECTS credits / total hours	3 credits / 90 hours
Semester assessment	Differentiated pass/fail assessment (graded credit)

Distribution of study hours

Lectures	Practical classes / Seminars	Independent study
0	26	64

Instructor

Item	Details
Full name	Anna-Malhozhata Borysivna Kotliarova
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Developed by A.-M. B. Kotliarova, Candidate of Biological Sciences.

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Head of the Educational and Research Programme, Doctor of Medical Sciences: _____ Yevhen MOISEIENKO

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НАЦІОНАЛЬНА АКАДЕМІЯ НАУК УКРАЇНИ * М. КИЇВ * ІНСТИТУТ ФІЗІОЛОГІЇ ім. О.О. Богомольця ідентифікаційний код 05417093

PURPOSE AND OBJECTIVES OF THE EDUCATIONAL COMPONENT

To develop the ability to prepare scientific manuscripts and grant proposals in English, and to present research ideas and the findings of biomedical studies logically and persuasively while adhering to the principles of academic integrity.

The main objectives are to develop academic writing skills, critical analysis, and editing of scientific texts; to familiarise students with scientific article publication procedures; and to build practical skills in planning research projects and preparing grant proposals.

COURSE DESCRIPTION

The course "Preparation of Scientific Publications and Grant Proposals in Biomedical Research" aims to develop practical skills in preparing scientific manuscripts and grant proposals in English. It covers the structure and content of research articles, the presentation and interpretation of research findings, academic style, editing, principles of academic integrity, journal selection, manuscript submission, and communication with reviewers. The grant-writing component focuses on identifying funding opportunities, justifying research ideas, designing methodologies, work plans and budgets, assessing risks, and disseminating project outcomes. Instruction includes practical work with texts, peer review, and the presentation and discussion of research ideas.

PLACE OF THE COURSE WITHIN THE CURRICULUM

The course is elective for first-year doctoral students in the educational and research programmes Biology and Biochemistry (Biophysics; Human and Animal Physiology; Pathological Physiology) and Medicine (Pathological Physiology). It is taught in the second semester of the first year.

PREREQUISITE SKILLS

To complete the course, students need basic knowledge of biomedical research methodology, skills in searching for and reading scientific literature, and proficiency with word processors. The recommended level of English is B2. The ability to read specialist literature in English and willingness to work with English-language scientific texts are important.

Upon completion of the course, doctoral students should demonstrate the following competencies and learning outcomes in accordance with the educational programme:

- identify the structure of a scientific article and prepare its main sections in English, in accordance with their function, the principles of academic writing and journal requirements;
- formulate the title, abstract, keywords, aim and objectives of a research study and provide a logical justification for its relevance;
- describe materials and methods in biomedical research and interpret and critically discuss the findings in English;
- edit scientific texts for terminological accuracy, logic, coherence, objectivity and concision, in accordance with academic integrity and publication ethics;
- prepare accompanying submission documents and reasoned responses to reviewers' comments;
- formulate a research idea and prepare the main structural components of a grant proposal;
- develop an implementation plan for a research project, justify the resources and budget required, identify potential risks, expected outcomes and dissemination methods;
- present biomedical research findings and research projects in English, answer questions with reasoned arguments, participate in scientific discussions, and conduct constructive peer review of colleagues' work.

GENERAL COMPETENCIES (GC)

GC1. Ability to communicate orally and in writing in the national and a foreign language in scientific and professional contexts, including English at CEFR C1 level, and to use modern methods and technologies of professional communication.

GC3. Ability to use modern digital tools and technologies and create digital content in one's professional activities.

GC4. Ability to conduct research at a professional level, manage research projects and make autonomous decisions, comply with safety standards, and act creatively, proactively and persistently when addressing research and clinically oriented problems.

GC5. Ability to observe ethical principles, academic integrity and bioethics in professional activities and apply appropriate methods of effective interaction with different professional, social and cultural groups.

GC7. Ability to think critically and evaluate the reliability, reproducibility and quality of research and publications.

SPECIALISED (PROFESSIONAL) COMPETENCIES (SC)

SC4. Ability to present, argue for and defend research findings orally and in writing in Ukrainian and English, and to analyse English-language scientific texts relevant to the research area.

SC7. Ability to commercialise research results and manage innovative biomedical projects. Ability to prepare grant proposals, evaluate the applied potential of fundamental pathophysiological research, and comply with bioethics and intellectual property protection requirements.

SC8. Ability to integrate into the international scientific community and engage in professional scientific discussion. Ability to present research findings at international conferences, maintain professional dialogue with the global scientific community, and participate in the development of international interdisciplinary projects in the life sciences.

PROGRAMME LEARNING OUTCOMES (PLO)

PLO4. General research skills, including oral and written presentation of the findings of one's own research, clear and detailed communication of scientific results, application of modern information technologies in research activities, and information retrieval from specialised literature using professional journals, databases and clinical registries.

PLO5. Ability to conduct specialised scientific seminars and publish scientific articles in biomedical journals.

PLO10. Use of academic Ukrainian and foreign languages in professional activities; fluent communication with colleagues, the scientific community and society at large.

PLO11. Demonstration of considerable authority, innovativeness, a high degree of independence and commitment to developing advanced ideas in professional and research activities.

PLO12. Ability to organise and coordinate the work of a scientific laboratory or research group while ensuring compliance with bioethical standards, safety regulations and legal requirements.

TEACHING AND LEARNING METHODOLOGY

Instruction is based on student-centred, competency-based and practice-oriented approaches aimed at developing doctoral students' skills in academic writing in English and in preparing scientific publications and grant proposals in biomedical research. The forms of instruction are seminars (practical classes) and independent study.

Explanatory and illustrative, problem-based inquiry, communicative, practice-based, and research-oriented teaching methods are used. Particular attention is paid to analysing examples of English-language scientific texts, studying typical academic phrases, identifying and correcting lexical, grammatical and stylistic errors, and editing sections of scientific manuscripts and grant proposals.

Practical work includes exercises using standard English-language expressions for different sections of scientific articles and grant proposals, writing and revising students' own texts, analysing abstracts, introductions, descriptions of methods, results, discussions and conclusions, as well as preparing cover letters and responses to reviewers.

Interactive approaches are used, including pair and small-group work, peer review, discussion, and presentation of prepared materials. Independent study involves reading English-language scientific articles and grant documents, learning academic vocabulary and common expressions, completing writing assignments, drafting sections of scientific papers and grant proposals, and revising texts following discussion in class.

Specialised information resources (open access):

1. Academic Phrasebank – a collection of standard English expressions for academic writing: https://www.phrasebank.manchester.ac.uk/

2. COPE (Committee on Publication Ethics) – resources on publication ethics: https://publicationethics.org/

3. ICMJE Recommendations – guidance on preparing and formatting manuscripts for biomedical journals: https://www.icmje.org/recommendations/

4. EQUATOR Network – guidelines for the preparation of scientific publications and research reporting: https://www.equator-network.org/

STRUCTURE AND CONTENT OF THE EDUCATIONAL COMPONENT (COURSE)

Module 1. Academic Writing and the Preparation of Scientific Publications

Introduction to the course: aims, timelines, assessment, adherence to academic integrity, etc.

Topic 1. Scientific writing: general principles, article structure and academic integrity

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Specific features of scientific communication in biomedical research. Main types of scientific publications. Structure of an original research article (IMRaD). Functional purposes of its main sections. Principles of academic integrity and publication ethics. Analysis of the structure of biomedical research papers. Identification of the main IMRaD components and their roles in presenting a study. Discussion of cases of academic misconduct, including plagiarism, data fabrication, and falsification.	2	Search for and analyse 2–3 scientific publications on the topic of the student's own research. Compare their structures and how the material is presented. Become familiar with international guidance on publication ethics and the responsible use of artificial intelligence tools in scientific writing.	4	6

Topic 2. Title, abstract and keywords of a scientific article

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Principles of formulating an informative article title. Structured and unstructured abstracts. Main components of an abstract and requirements concerning content, length and style. Selection of keywords and use of standardised scientific terminology. Comparative analysis of publication titles and abstracts. Identification of common shortcomings in wording. Practical editing of titles, abstracts and keywords in English. Study of common expressions: "This study aimed to…"; "We investigated…"; "Our findings suggest that…", etc. Editing abstracts to eliminate ambiguity and unnecessary wording. Practical abstract writing in English.	2	Analyse the titles and abstracts of 3–5 articles from international journals in the student's research field. Study a topic-specific set of academic expressions. Compare abstracts from international journals. Formulate a title, prepare an abstract, and select keywords for an original or model study. Develop several alternative titles for the student's own article. Draft an abstract in English and select keywords.	5	7

Topic 3. Introduction: context, problem, research gap, aim and hypothesis

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Structure of the Introduction section. Presentation of scientific context and the relevance of a study. Analysis of the current state of the field. Identification of a research gap. Language patterns for presenting the importance of a problem, prior studies, and gaps in knowledge (research gaps). Devices for contrast and logical transitions between statements. Formulation of a study's aim, objectives and hypothesis. Logical sequencing and argumentation. Study and practical use of expressions such as "Previous studies have demonstrated…"; "However, little is known about…"; "The present study aimed to…". Analysis of the logical sequencing of paragraphs. Structural analysis of Introduction sections in scientific articles. Identification of the research problem and knowledge gap. Practical exercises in formulating the study aim and hypothesis. Writing and discussing introductory passages in English.	2	Find and critically analyse current scientific sources relevant to the student's own research. Identify unresolved research questions. Study common language patterns used in Introductions and find examples of their use in scientific literature. Write part of an Introduction to the student's own article using the expressions studied.	5	7

Topic 4. Writing Materials and Methods: grammar and style for describing experimental procedures

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Principles of preparing the Materials and Methods section. Describing experimental models, materials, equipment, methods and study design. Requirements for reproducibility. Reporting statistical analysis methods. Ethical aspects of biomedical research. Features of academic style in	2	Compare the methodology sections of scientific publications. Study guidance on transparency and reproducibility in biomedical research. Prepare a Materials and Methods passage for an original or model	5	7

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
methodological descriptions. Use of active and passive voice in scientific texts. Verb tenses in Materials and Methods. Standard expressions for describing experimental procedures, materials, equipment, and statistical processing. Prepositions, fixed collocations and common translation errors. Analysis of methods sections in scientific papers. Evaluation of the completeness and reproducibility of experimental procedure descriptions. Practical writing and editing of Materials and Methods passages in English. Study of expressions such as "Recordings were obtained using…"; "Samples were incubated with…"; "Data were analyzed using…". Exercises on verb tenses and active/passive voice. Correction of imprecise wording. Writing and revising experimental procedure descriptions in English. Discussion of common methodological and stylistic shortcomings.		study. Learn typical expressions for describing research methods. Analyse their use in international publications. Write or revise a Materials and Methods passage for the student's own study.		

Topic 5. Writing Results: language patterns for presenting and comparing findings

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Academic vocabulary for describing changes, differences, relationships and trends. Expressions for comparing experimental groups and conditions. Language conventions for reporting statistical results. Referencing figures and tables. Distinguishing the description of results from their interpretation. Common incorrect or excessively categorical statements. Study expressions such as "A significant decrease was observed…"; "Compared with the control group…"; "No statistically significant difference was detected…"; "As shown in Figure 1…", etc. Compare alternative ways of reporting the same results. Edit inappropriate wording. Practise writing passages for the Results section.	2	Learn academic expressions for describing results and find examples of their use in biomedical articles. Write a Results section passage in English based on the student's own or sample data. Identify and correct common language errors.	5	7

Topic 6. Writing Discussion and Conclusions: argumentation, cautious claims and scientific style

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Language devices for interpreting findings and comparing them with previous studies. Expressions for explaining possible mechanisms. Hedging. Formulating the limitations, scientific significance and future directions of a study. Differences between assumptions, conclusions and facts. Common errors involving overly categorical claims. Study and use expressions such as "These findings are consistent with…"; "One possible explanation is…"; "This may be attributed to…"; "A limitation of this study is…". Exercises on appropriate wording of scientific assumptions. Editing overly categorical claims. Writing Discussion and Conclusions passages.	2	Study a topic-specific set of expressions for interpreting and discussing findings. Prepare a Discussion passage in English and formulate conclusions. Select a passage from the student's manuscript for peer review.	6	8

Topic 7. Academic editing and peer review of scientific texts

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Principles of editing English-language scientific texts. Logical coherence, terminological accuracy, academic style, and common language errors. Criteria for evaluating the quality of scientific writing. Language patterns for constructive criticism, recommendations and appropriate scientific discussion. Peer review of prepared scientific manuscript passages. Pair	2	Conduct a preliminary review of another doctoral student's manuscript passage against defined criteria. Prepare written comments. Revise the student's own text. Familiarise oneself with the main requirements of international journals	6	8

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
or small-group work. Identification of language, stylistic, and logical shortcomings. Formulation of comments and recommendations in English. Collaborative editing based on feedback received.		concerning manuscript formatting, citation and reference lists.		

Topic 8. Journal selection, manuscript submission and academic correspondence with editors and reviewers

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Criteria for selecting a scientific journal. Language conventions for cover letters. Academic etiquette and language for professional correspondence. Structure of responses to reviewers' comments. Expressions of gratitude, explanations, reasoned agreement and disagreement. Common mistakes in communication with editorial offices. Analyse examples of cover letters and responses to reviewers. Study expressions such as "We thank the reviewer for this valuable comment…"; "We have revised the manuscript accordingly…"; "We respectfully disagree with this suggestion because…". Practise writing cover letters and responses to simulated reviewer comments. Module assessment.	2	Search for and compare potential journals for the student's own research. Read author instructions. Prepare a cover letter and written responses to simulated reviewers' comments in English.	5	7

Module 1 total	Class hours	Self-study hours	Total hours
	16	41	57

Module 2. Writing Grant Proposals in English

Topic 9. Searching for grant funding and the language of grant documentation

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Features of English-language grant terminology. Structure of funding announcements (calls for proposals). Typical wording of applicant requirements, eligibility criteria and evaluation criteria. Structure of a grant proposal. Formal style of grant documentation. Analysis of English-language funding calls. Work with terminology including "eligibility criteria", "funding scheme", "proposal", "deliverables", "milestones" and "expected outcomes". Exercises in understanding call requirements and drafting a short description of a project idea in English.	2	Find a relevant funding call. Analyse its English-language documentation. Compile a topic-specific glossary of grant terminology. Prepare a short description of the student's own research idea.	4	6

Topic 10. Writing the rationale for a grant idea: relevance, aim, objectives, novelty and impact

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Language patterns for justifying the relevance of a study. Formulating a central hypothesis, aim, specific objectives, scientific novelty, and expected impact. Devices for persuasive argumentation. Typical exaggerated claims and ineffective wording in grant proposals. Practical use of expressions such as "The proposed project aims to…"; "The central hypothesis is that…"; "This project will address…"; "The expected outcomes include…", etc. Analysis and editing of grant proposal passages. Presentation and discussion of the student's own research idea in English.	2	Study common expressions used in grant proposals. Prepare an English-language rationale for the relevance, aim, objectives, and scientific novelty of the student's own project.	4	6

Topic 11. Language for describing project methodology, work plan, expected results and risks

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Features of describing grant project methodology in English. Language devices for presenting stages of work, team responsibilities, timelines and expected results. Expressions for risk assessment and planning alternative approaches. Formulating realistic and measurable outcomes. Study expressions such as "The project will be divided into…"; "Work Package 1 will focus on…"; "To mitigate this risk…"; "An alternative approach will be…". Write and edit grant methodology, work plan, and risk-description passages in English.	2	Prepare an English-language description of the project methodology, key implementation stages and expected results. Identify risks and appropriate mitigation measures. Develop an indicative implementation schedule.	4	6

Topic 12. Writing budget justifications, statements of expected impact and dissemination plans

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
English terminology for grant project budgets. Common expressions for justifying expenses. Language used to describe a project's scientific and societal impact. Features of writing plans to disseminate and use findings. Ethical and regulatory requirements for grant applications. Common mistakes and exaggerated promises. Analyse examples of grant budget justifications. Use expressions such as "The requested funds will be used to…"; "These resources are essential for…"; "The findings will be disseminated through…". Write passages justifying the budget and outlining the dissemination plan in English. Peer editing. Module assessment.	2	Prepare an indicative budget for the student's own project and justify it in English. Write a short dissemination plan. Prepare materials for the final seminar.	4	6

Topic 13. Presentation, expert evaluation and discussion of research projects in English

Practical / seminar class	Class hours	Independent study assignments	Self-study hours	Total hours
Language devices for presenting research ideas. Structuring a scientific presentation. Formulating key points, argumentation and defence of a scientific position. Academic discussion etiquette. Constructive peer review and feedback. Presentations of students' own research projects in English. Simulation of the work of an expert panel reviewing a grant competition. Practical use of expressions for questions, reasoned answers, critical comments and recommendations. Peer assessment of projects and final discussion. Answers to questions and final assessment of learning outcomes.	2	Prepare a short presentation of the student's own grant project in English. Review subject-specific vocabulary and academic expressions. Prepare for expert discussion and reasoned defence of the research idea (before the class).	7	9

Module 2 total	Class hours	Self-study hours	Total hours
	10	23	33

Grand total	Class hours	Self-study hours	Total hours
	26	64	90

QUESTIONS FOR CONTINUOUS AND FINAL ASSESSMENT

Continuous assessment is conducted by evaluating practical and independent-study assignments, including exercises on academic vocabulary and common language patterns, the analysis and editing of English-language scientific texts, the preparation of individual sections of scientific manuscripts and grant proposals, and participation in discussions and peer review.

Final assessment comprises a comprehensive evaluation of practical skills gained, based on written work prepared by students and its presentation during the final seminar. Assessment considers adherence to academic style; appropriate use of scientific terminology and standard English academic expressions; logical, well-supported communication; the ability to

critically analyse scientific texts and provide constructive recommendations; and the ability to answer questions with reasoned arguments.

QUESTIONS AND ASSIGNMENTS FOR CONTINUOUS ASSESSMENT

Module 1. Academic Writing and the Preparation of Scientific Publications

1. Describe the main features of academic style in English. Give examples of common language and stylistic errors and suggest ways to correct them.

2. Demonstrate the principles of accuracy, concision, objectivity, and logical coherence in scientific writing. Reformulate the given sentences in accordance with academic style requirements.

3. Describe the structure of a scientific article (IMRaD). Identify the purpose of its main sections and the language patterns typical of each.

4. Formulate several versions of an English-language scientific article title. Analyse their informativeness, accuracy, and conformity with academic style.

5. Describe the structure of a scientific abstract. Give examples of typical English-language expressions for stating the aim, methods, results, and conclusions of a study.

6. Demonstrate the use of academic expressions to present previous research, justify the relevance of a scientific problem and identify a research gap.

7. Formulate the aim, objectives and hypothesis of a proposed study in English. Use appropriate language patterns and explain your choices.

8. Describe the use of verb tenses and the active and passive voice in Materials and Methods. Correct grammatical and stylistic errors in the given passage.

9. Give examples of common English collocations and grammatical structures for describing experimental procedures, materials, equipment, and research methods. Demonstrate their use.

10. Demonstrate the use of academic expressions to describe changes, trends, relationships and comparisons of experimental findings in the Results section.

11. Write descriptions in English of statistically significant and non-significant results, as well as references to figures and tables. Identify inaccurate or overly categorical formulations.

12. Give examples of expressions used in the Discussion section to interpret findings, compare them with previous studies, and explain possible mechanisms.

13. Explain the role of hedging in academic writing. Reformulate the given categorical statements using appropriate modal verbs, adverbs, and other language devices.

14. Demonstrate the use of common English-language expressions for describing study limitations, scientific significance, directions for future research and conclusions.

15. Analyse the given English-language scientific text. Identify lexical, grammatical, stylistic, and logical shortcomings. Suggest and justify corrections.

16. Prepare an example of an English-language cover letter or a response to a reviewer's comment using standard academic correspondence phrases.

Module 2. Writing Grant Proposals in English

18. Analyse a given English-language call for proposals, identify its principal requirements and explain key terms.

19. Describe the structure of a grant proposal. Give examples of standard English expressions typical of its main sections.

20. Demonstrate the use of academic expressions to justify the relevance, scientific novelty, and significance of a research idea. Edit the given vague or overly categorical wording.

21. Formulate the aim, specific objectives, hypothesis, expected outcomes and potential impact of a proposed grant project in English.

22. Give examples of typical language patterns for describing the methodology, implementation stages, work packages, expected outcomes, and risks of a project. Demonstrate their use in a grant proposal passage.

23. Demonstrate the use of English terminology and standard phrases to justify a project budget and describe required resources, expected impact and the dissemination plan.

COMPREHENSIVE PRACTICAL ASSIGNMENTS FOR FINAL ASSESSMENT (CREDIT)

1. Analyse the given passage from an English-language scientific text. Identify and correct language, stylistic, and logical shortcomings. Justify your proposed changes.

2. Write a short passage from a scientific article in English, using standard academic expressions to state the aim, describe findings, or formulate conclusions.

3. Critically analyse a passage from another author's scientific manuscript. Assess terminological accuracy, logical coherence, and academic style. Formulate constructive comments and recommendations in English.

4. Prepare a cover letter to a scientific journal or a written response to simulated reviewer comments in accordance with academic etiquette and the relevant language conventions.

5. Present an original or model research idea in English. Justify its relevance, scientific novelty, aim, main objectives, and expected outcomes.

6. Prepare an English-language grant proposal passage covering the methodology, work plan, possible risks, justification of required resources, or expected impact.

7. Present and defend the prepared materials for a scientific manuscript or grant project in English, with well-supported arguments. Constructively assess the work of other participants, make recommendations for its improvement and demonstrate an ability to engage in specialist scientific discussion.

SYSTEM FOR ASSESSING LEARNING OUTCOMES

Students' learning outcomes are assessed on a 100-point scale, including continuous and final assessment.

Continuous assessment takes place during seminars (practical classes) and independent study. It covers students' class participation and contributions to discussions, practical writing assignments, editing of English-language scientific texts, preparation of sections of scientific articles and grant proposals, participation in peer review, and completion of module assessments.

The final assessment is conducted in the form of a credit assessment and involves a comprehensive evaluation of the practical skills developed in academic writing in English, as well as preparing and editing scientific publications and grant proposals. It assesses the ability to use academic vocabulary and standard English expressions, present material logically and persuasively, edit texts, formulate constructive feedback, and present one's work.

The maximum score for the course is 100 points, of which 60 points are awarded for continuous assessment and independent study and 40 points for final assessment (credit).

Continuous assessment

No.	Assessment activity	Points
1	Class participation (answers to questions, participation in discussions, etc.)	1 point each; maximum 10
2	Practical assignments (drafting sections of a scientific article, language exercises, preparing components of a grant proposal)	3–4 points each; maximum 35
3	Presentation reports in seminars T7 and T13	15 points each; maximum 30
4	Module assessment	5 points each; maximum 10
	Total	60

National and ECTS grading scale

National grade (examination)	Differentiated credit / test	Minimum points	Maximum points	ECTS grade
Excellent	Passed	90	100	A
Good	Passed	82	89	B
Good	Passed	74	81	C
Satisfactory	Passed	64	73	D
Satisfactory	Passed	60	63	E
Unsatisfactory	Not passed	35	59	Fx
Unsatisfactory	Not passed	1	34	F

Grades of "Excellent", "Good" and "Satisfactory" are awarded on the basis of examinations. A grade of "Passed" is awarded on the basis of credit assessments.

A doctoral student is considered to have successfully mastered the material of a content module if their rating is at least 60 points on the 100-point scale.

Additional conditions for admission to the credit assessment:

In cases of disputes concerning the non-admission of doctoral students to the differentiated credit assessment, the issue is resolved by the course lecturer jointly with the head of the department.

COURSE POLICIES AND ASSESSMENT PROCEDURES

Attendance is compulsory for all doctoral students. Material from classes missed for any reason must be studied independently.

A substantial share of the assessment is allocated to participation in class. The total number of bonus points must not exceed 10% of the points awarded during the semester (no more than 10 points in total).

Reports are presented during seminars. Time is provided for questions and discussion. Responses influence the overall grade for the presentation.

Deadlines for module assessments are announced before they begin. Work not submitted on time is not credited. A student who fails to attend a module assessment receives a score of zero for that assessment.

Missed assessments may be retaken at a time determined by the instructor, with permission from the head of the department. Doctoral students who miss classes during the current semester and, before the beginning of the examination period, fail to master the material of the missed topics and content modules or to provide a reasoned written explanation for their absences are not admitted to the semester assessment in the relevant course.

ACADEMIC INTEGRITY AND ETHICAL CONDUCT

All submitted work must be original, with appropriate citations of the sources used. Plagiarism, data fabrication or falsification, resubmission of the same work, use of other people's materials without attribution, and improper use of artificial intelligence are prohibited. If a violation is detected, the assignment receives no points (0 points), with the possibility of resubmission at the instructor's discretion. The academic integrity policy and principles are established by the laws of Ukraine and the Institute's Regulations on Academic Integrity:

https://biph.kiev.ua/images/7/70/Положення_Про_академічну_доброчесність_1777965318.pdf

Ethical conduct is expected during classes, including respect for colleagues, courteous discussion, and appropriate use of visual and written materials. Ethical standards for doctoral students and staff are set out in the Institute's Statute, applicable laws and subordinate regulations, and relevant Institute policies:

https://biph.kiev.ua/images/5/5e/ПОЛОЖЕННЯ_про_комісію_НЕтик.pdf

https://biph.kiev.ua/images/0/06/Polozhennya_pro_osvitnyu_diyalnist_BIPH-pd-2026.pdf

POLICY ON THE USE OF AI TOOLS

Artificial intelligence (AI) tools may be used as auxiliary aids, but not as a substitute for students' own analytical and methodological work. In particular, AI may assist with preliminary editing and text structuring, provided that factual information is verified, generated content is critically assessed, and the student provides their own interpretation.

The general rules and ethical standards for the use of artificial intelligence in education include the following:

- AI-generated content must be clearly identified;
- the use of AI must not compromise honesty, independent completion of assignments, or appropriate citation of sources;
- confidential information about students, employees, or financial transactions must not be uploaded to AI systems;
- any AI-generated content must be reviewed by a person before use. AI cannot be recognised as the author of scientific work; its use must remain supplementary for data analysis or idea generation;
- the use of AI to manipulate information or falsify scientific data is prohibited;
- only verified AI tools that meet ethical standards and have undergone conformity assessment may be used. The use of software and communications (network) equipment included in the publicly available list of software prohibited for use, maintained by the Administration of the State Service of Special Communications and Information Protection of Ukraine under the Procedure approved by Resolution No. 1335 of the Cabinet of Ministers of Ukraine of 22 October 2025, based on sanctions decisions, is prohibited. AI services and other software developed by the aggressor state or

sanctioned entities, as well as services that do not ensure adequate data protection or have opaque data-processing terms (Yandex Cloud, Yandex Cloud AI Hybrid, Yandex SpeechKit Box, etc.), must not be used.

Every completed assignment, report, or presentation must specify which AI tools, if any, were used and for what purpose. The GAIDeT declaration generator is recommended for disclosing tasks delegated to generative AI tools: https://panbibliotekar.github.io/gaidet-declaration/index-uk.html

PROCEDURE FOR APPEALING ASSESSMENT RESULTS

Doctoral students may raise any question concerning assessment procedures and may expect it to be considered in accordance with pre-established procedures and the regulations governing appeals:

https://biph.kiev.ua/images/9/9f/Положення_про_порядок_подання_та_розгляду_апеляцій_здобувачів.pdf

RECOMMENDED LITERATURE AND INFORMATION RESOURCES

Core readings

1. Wirth F. et al. Writing a manuscript for publication in a peer-reviewed scientific journal: Guidance from the European Society of Clinical Pharmacy. International Journal of Clinical Pharmacy. 2024. Vol. 46. Pp. 548–554. https://doi.org/10.1007/s11096-023-01695-6

2. Shah S. How to write better. Journal of Hospital Medicine. 2024. https://doi.org/10.1002/jhm.13449

3. Fontanarosa P. B., Flanagin A., Greenland P., Rivara F. P. (eds.). Principles of Scientific Writing and Biomedical Publication: A JAMA Editors' Guide for Authors. Oxford University Press, 2024. https://academic.oup.com/book/58841

4. International Committee of Medical Journal Editors (ICMJE). Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. Updated January 2026. https://www.icmje.org/recommendations/

Additional readings

1. Committee on Publication Ethics (COPE). Core Practices. https://publicationethics.org/core-practices

2. Patrias K., Wendling D. L. (eds.). Citing Medicine: The NLM Style Guide for Authors, Editors, and Publishers. 2nd ed. Bethesda: National Library of Medicine, 2007–. https://www.ncbi.nlm.nih.gov/books/NBK7256/

3. National Institutes of Health (NIH). General Grant Writing Tips. https://www.grants.nih.gov/grants-process/write-application/general-grant-writing-tips

4. National Institute of Mental Health (NIMH). Common Mistakes in Writing Applications — typical errors in grant proposal preparation. https://www.nimh.nih.gov/funding/grant-writing-and-application-process/common-mistakes-in-writing-applications

Online resources and electronic libraries

1. Google Scholar — search engine for scientific literature: https://scholar.google.com/

2. PubMed — database of biomedical scientific publications: https://pubmed.ncbi.nlm.nih.gov/

3. PubMed Central (PMC) — full-text repository of biomedical scientific publications: https://pmc.ncbi.nlm.nih.gov/

4. EQUATOR Network — international guidelines for reporting research findings: https://www.equator-network.org/

5. NIH Grants & Funding — guidance on preparing and submitting grant proposals: https://grants.nih.gov/

6. EU Funding & Tenders Portal — European portal for searching for funding calls and research funding: https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home

7. Academic Phrasebank (University of Manchester) — a collection of academic expressions and language patterns for writing scientific papers: https://www.phrasebank.manchester.ac.uk/

8. Oxford Learner's Dictionary of Academic English — specialised dictionary of academic English: https://www.oxfordlearnersdictionaries.com/definition/academic

9. Oxford Collocations Dictionary — a dictionary of English word combinations for academic writing: https://www.oxfordlearnersdictionaries.com/

The generative artificial intelligence tool ChatGPT (OpenAI) was used during the development of this educational component to improve the organisation of learning materials and to edit the text. The course concept, selection and content of topics, final editing and verification of the materials were carried out by the syllabus author. The English translation of this document was also prepared with the assistance of the generative artificial intelligence tool ChatGPT (OpenAI).