**SYLLABUS**

**Spring semester 2023-2024 academic years**

**on the educational program 6B101102 – Pharmacy**

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| **ID**  **and name**  **of course** | **Independent work**  **of the student**  **(IWS)** | | **Number of credits** | | | **General**  **number**  **of credits** | **Independent work**  **of the student**  **under the guidance**  **of a teacher (IWST)** | |
| **Lectures (L)** | **Practical classes (PC)** | **Sem. classes (SC)** |
| Bot1204  “Botany” | 4 | | 0 | 0 | 45 | 6 | 4 | |
| **ACADEMIC INFORMATION ABOUT THE COURSE** | | | | | | | | |
| **Learning Format** | **Cycle,**  **component** | **Lecture**  **types** | | **Types**  **of seminar classes** | | **Form and platform final control** | | |
| *Offline* | major disciplines (MD). University component (UС) | Information with visualization | | Solution of situational problems | | Exam - written in the auditorium according to the schedule | |  |
| **Teacher - (s)** | Zaparina Yelena Gennadievna  department of biodiversity and bioresources | | | | |  | | |
| **e-mail :** | Zaparina.elena06@gmail.com | | | | |
| **Phone :** | 87024616800 | | | | |
| **ACADEMIC COURSE PRESENTATION** | | | | | | | | |
| **Purpose**  **of the course** | **Expected Learning Outcomes (LO) \***  As a result of studying the discipline the undergraduate will be able to: | | | | | **Indicators of LO achievement (ID)**  The undergraduate: | | |
| In result of this course the students will be able to recognize the anatomical and morphological structure of individual organs of plants, dependence of the structure on the function, symptoms and causes improvements in the phylogeny of plants, as well as the terms and concepts of the course. | 1. Be able to identify structure of different vegetative parts of plants (leaf, stem, root) in Monocots as well as Dicots | | | | | 1.1 to distinguish leaves, stems and roots by their anatomical features. | | |
| 1.2 to distinguish Monocots and Dicots by their anatomical features of vegetative plants parts | | |
| 2. Be able to identify morphological features of leaves, stems, roots, flowers and fruits in Monocots as well as Dicots | | | | | 2.1 to describe morphological features of leaves, stems and roots | | |
| 2.2 to describe morphological flowers and fruits | | |
| 3. Be able to identify higher and lower plants | | | | | 3.1 to distinguish algae, fungi, gymnosperms and angiosperms. | | |
| 3.2 to distinguish main taxonomic elements of higher plants: families, genera and species. | | |
| 4. Be able to clearly and logically articulate their ideas in oral audition of presentation and to find reliable information about anatomy and morphology plants in the library or on the internet | | | | | 4.1 have skills to prepare and to introduce a audition of presentation according to requirements. | | |
| 4.2 have skills to find reliable scientific information in Internet | | |
| **Prerequisites** | Course of Biology in school. | | | | | | | |
| **Postrequisites** | Systematics of plants, Plant ecology. | | | | | | | |
| **Learning Resources** | **Literature:**   1. Shipunov A. Introduction to Botany. 2018. – 181 p. <https://herba.msu.ru/shipunov/school/f/intro_botany.pdf> 2. Raven P., Evert R.F. , Eichhorn S.E. Biology of Plants. By W. H. Freeman and Company 2013. – 864 p. 3. Milena Martinková, Martin Čermák, Roman Gebauer, Zuzana Špinlerová. Plant Botany.An introduction to plant anatomy, morphology and physiology. Brno, 2014. 103 p. eBook 4. Michael G. Simpson Plant Systematics *(*Third Edition*)*. - 2018. – 774 p. ebook 5. Gurcharan Singh. Plant Systematics. An Integrated Approach. **Science Publishers. -** 2011. – 716 p. 6. Arun K. Pandey, Shruti Kasana. Plant Systematics. CRC Press. – 2021. – 340 p.   **Internet resources:**  <http://elibrary.kaznu.kz/ru/>  https://study.com/academy/topic/introduction-to-plant-anatomy.html <https://botanydepot.com/2021/01/20/videos-plant-systematics-lectures-by-bruce-kirchoff/> | | | | | | | |

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| **Academic**  **course policy** | | The academic policy of the course is determined by [the Academic Policy](https://univer.kaznu.kz/Content/instructions/%D0%90%D0%BA%D0%B0%D0%B4%D0%B5%D0%BC%D0%B8%D1%87%D0%B5%D1%81%D0%BA%D0%B0%D1%8F%20%D0%BF%D0%BE%D0%BB%D0%B8%D1%82%D0%B8%D0%BA%D0%B0.pdf) and [the Policy of Academic Integrity of Al-Farabi Kazakh National University .](https://univer.kaznu.kz/Content/instructions/%D0%9F%D0%BE%D0%BB%D0%B8%D1%82%D0%B8%D0%BA%D0%B0%20%D0%B0%D0%BA%D0%B0%D0%B4%D0%B5%D0%BC%D0%B8%D1%87%D0%B5%D1%81%D0%BA%D0%BE%D0%B9%20%D1%87%D0%B5%D1%81%D1%82%D0%BD%D0%BE%D1%81%D1%82%D0%B8.pdf)  Documents are available on the main page of IS Univer .  **Integration of science and education.** The research work of students, undergraduates and doctoral students is a deepening of the educational process. It is organized directly at the departments, laboratories, scientific and design departments of the university, in student scientific and technical associations. Independent work of students at all levels of education is aimed at developing research skills and competencies based on obtaining new knowledge using modern research and information technologies. A research university teacher integrates the results of scientific activities into the topics of lectures and seminars (practical) classes, laboratory classes and into the tasks of the IWST, IWS, which are reflected in the syllabus and are responsible for the relevance of the topics of training sessions andassignments.  **Attendance.** The deadline for each task is indicated in the calendar (schedule) for the implementation of the content of the course. Failure to meet deadlines results in loss of points.  **Аcademic honesty.** Practical/laboratory classes, IWS develop the student's independence, critical thinking, and creativity. Plagiarism, forgery, the use of cheat sheets, cheating at all stages of completing tasks are unacceptable.  Compliance with academic honesty during the period of theoretical training and at exams, in addition to the main policies, is regulated by [the "Rules for the final control"](https://univer.kaznu.kz/Content/instructions/%D0%9F%D1%80%D0%B0%D0%B2%D0%B8%D0%BB%D0%B0%20%D0%BF%D1%80%D0%BE%D0%B2%D0%B5%D0%B4%D0%B5%D0%BD%D0%B8%D1%8F%20%D0%B8%D1%82%D0%BE%D0%B3%D0%BE%D0%B2%D0%BE%D0%B3%D0%BE%20%D0%BA%D0%BE%D0%BD%D1%82%D1%80%D0%BE%D0%BB%D1%8F%20%D0%9B%D0%AD%D0%A1%202022-2023%20%D1%83%D1%87%D0%B3%D0%BE%D0%B4%20%D1%80%D1%83%D1%81%D1%8F%D0%B7%D1%8B%D0%BA%D0%B5.pdf) , ["Instructions for the final control of the autumn / spring semester of the current academic year"](https://univer.kaznu.kz/Content/instructions/%D0%98%D0%BD%D1%81%D1%82%D1%80%D1%83%D0%BA%D1%86%D0%B8%D1%8F%20%D0%B4%D0%BB%D1%8F%20%D0%B8%D1%82%D0%BE%D0%B3%D0%BE%D0%B2%D0%BE%D0%B3%D0%BE%20%D0%BA%D0%BE%D0%BD%D1%82%D1%80%D0%BE%D0%BB%D1%8F%20%D0%B2%D0%B5%D1%81%D0%B5%D0%BD%D0%BD%D0%B5%D0%B3%D0%BE%20%D1%81%D0%B5%D0%BC%D0%B5%D1%81%D1%82%D1%80%D0%B0%202022-2023.pdf) , "Regulations on checking students' text documents for borrowings".  Documents are available on the main page of IS Univer .  **Basic principles of inclusive education.** The educational environment of the university is conceived as a safe place where there is always support and equal attitude from the teacher to all students and students to each other, regardless of gender, race / ethnicity, religious beliefs, socio-economic status, physical health of the student, etc. All people need the support and friendship of peers and fellow students. For all students, progress is more about what they can do than what they can't. Diversity enhances all aspects of life.  All students, especially those with disabilities, can receive counseling assistance by phone / e- mail 8 702 46 16 800 / [zaparina.elena06@gmail.com](mailto:zaparina.elena06@gmail.com) MS Teams  **ATTENTION!** The deadline for each task is indicated in the calendar (schedule) for the implementation of the content of the course, as well as in the MOOC. Failure to meet deadlines results in loss of points. | | | | |
| **INFORMATION ABOUT TEACHING, LEARNING AND ASSESSMENT** | | | | | | |
| **Score-rating letter system of assessment of accounting for educational achievements** | | | | | **Assessment Methods** | |
| **Grade** | **Digital**  **equivalent**  **points** | | **points,**  **% content** | **Assessment according to the traditional system** | **Criteria-based assessment** is the process of correlating actual learning outcomes with expected learning outcomes based on clearly defined criteria. Based on formative and summative assessment.  **Formative assessment is** a type of assessment that is carried out in the course of daily learning activities. It is the current measure of progress. Provides an operational relationship between the student and the teacher. It allows you to determine the capabilities of the student, identify difficulties, help achieve the best results, timely correct the educational process for the teacher. The performance of tasks, the activity of work in the classroom during lectures, seminars, practical exercises (discussions, quizzes, debates, round tables, laboratory work, etc.) are evaluated. Acquired knowledge and competencies are assessed.  **Summative assessment** -type of assessment, which is carried out upon completion of the study of the section in accordance with the program of the course.Conducted 3-4 times per semester when performing IWS. This is the assessment of mastering the expected learning outcomes in relation to the descriptors. Allows you to determine and fix the level of mastering the course for a certain period. Learning outcomes are evaluated. | |
| A | 4.0 \_ | | 95-100 | Great |
| A- | 3.67 | | 90-94 |
| B+ | 3.33 | | 85-89 | Fine |
| B | 3.0 | | 80-84 | **Formative and summative assessment** | **Points % content** |
| B- | 2.67 | | 75-79 | Activity at lectures | 3 |
| C+ | 2.33 | | 70-74 | Work in seminar classes | 20 |
| C | 2.0 | | 65-69 | Satisfactorily | Independent work | 25 |
| C- | 1.67 | | 60-64 | Design and creative activity | 10 |
| D+ | 1.33 | | 55-59 | Unsatisfactory | Final control (exam) | 40 |
| D | 1.0 | | 50-54 | TOTAL | 100 |
| **Calendar (schedule) for the implementation of the content of the course. Methods of teaching and learning.** | | | | | | |

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| **A week** | **Topic name** | **Number of hours** | **Max.**  **ball** |
| **MODULE 1 Plant anatomy** | | | |
| **1** | **Seminar 1.** Explain the structure of the plant cell. Membrane bound & non-membrane bound organelles. | 2 | 8 |
| **2** | **S 2.** Explain the structure different plant tissue. | 2 | 8 |
| **IWS 1.** Types, functions and importance of major plant tissues |  | 15 |
| **3** | **S 3.** Explain the anatomical structure of root. | 2 | 8 |
|  | **IWST 1 Consultation by the topic 1-3** |  |  |
| **4** | **S 4.** Explain the anatomical structure of stem. | 2 | 8 |
| **5** | **S 5.** Explain the anatomical structure of leaf. | 2 | 8 |
|  | **IWS 2.** Main structural features of the organs of monocotyledonous and dicotyledonous plants |  | 15 |
| **6** | **S 6.** Explain the main vegetative organs of higher plants. | 2 | 8 |
| **7** | **S 7.** Explain a shoots and their modifications in higher plants.. | **2** | 22 |
| **IWST 2. Consultation by the topic 4-7** |  |  |
| **Midterm control 1** | | | **100** |
|  | | |  |
| **MODULE 2 Plant morphology** | | |  |
| **8** | **S 8** Explain the leaves and their modifications in higher plants. |  | 7 |
| **9** | **S 9.** Explain the generative organs of higher plants. |  | 7 |
|  | **IWS 3**. Modifications of the anatomical structure of organs under the influence of phytohormones |  | 15 |
| **10** | **S 10.** Explain the seeds, dry and fleshy fruits, compound fruits of higher plants. |  | 7 |
|  | **MODULE 3 Plant systematics** |  |  |
| **11** | **S 11.** Explain the general characteristics of Algae. |  | 7 |
| **12** | **S 12.** Explain the general characteristics of the kingdom of Fungi. |  | 7 |
|  | **IWST 3. Consultation by the topic 8-12** |  |  |
| **13** | **S 13.** Explain the general characteristics of higher spore plants. |  | 7 |
|  | **IWST 4. Consultation by the topic 13-15** |  |  |
| **14** | **S 14.** Explain the general characteristics of flowering plants. Dicots. |  | 6 |
|  | **IWS 4**. Practical significance of plants in medicine |  | 15 |
| **15** | **S 15.** Explain the general characteristics of monocots. |  | 22 |
| **Midterm control 2** | | | **100** |
| **Final control (exam)** | | | **100** |
| **TOTAL for course** | | | **100** |

**Dean \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **Kurmanbayeva M.S.**

**Head of Department \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Kegenova G.B.**

**Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Zaparina Ye.G.**

**RUBRICATOR OF THE SUMMATIVE ASSESSMENT**

**CRITERIA EVALUATION OF LEARNING OUTCOMES**

**SIW 1: A group presentation «Types, functions and importance of major plant tissues» (15% of 100% MC)**

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| **Criterion** | **"Excellent"**  10-15 % | **"Good"**  8-10 % | **"Satisfactory"**  5-8 % | **"Unsatisfactory"**  0-15 % |
| **Understanding Theories**  **and basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.** | Deep understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Relevant and relevant links (citations) to key sources are provided. | Understanding theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Links (citations) to key sources are provided. | Limited understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Limited references (citations) to key sources are provided. | Superficial understanding / lack of understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Relevant references (citations) to key sources are not provided. |
| **Understanding the types of main tissues: assimilation, storage, aerenchyma, aquiferous parenchyma. Knows their structure, functions and placement in the plant. Has an understanding of the importance of the main tissues in a plant.** | Deep understanding of the of the main tissues, can clearly distinguish the following types: assimilation, storage, aerenchyma, aquiferous parenchyma. He knows very well the structure of various types of cells, their functions, as well as their placement in the plant. Without difficulty he can explain the significance of the main tissues in a plant.  Excellently substantiates his answers, justifying them with examples. | Partially understanding the types of basic tissues, can distinguish the following types: assimilation, storage, aerenchyma, aquiferous parenchyma. Can distinguish some cells from each other, has information about their functions. May explain the importance of some basic tissues in a plant.  You can back up some of your answers with examples. | Limited understanding of the underlying tissues and a general understanding of the cells and functions performed. There is no understanding of the placement of major tissues in a plant, but the importance of individual types is mentioned. Limited number of reasoned examples for answers. Limited connection of the concepts of professional identity and professionalism of teachers with the context of Kazakhstan. Limited use of evidence from empirical research. | Not understanding of basic tissues. There is no logical connection in the answers, which are not supported by arguments and are not supported by examples. |
| **Consideration of the main provisions, giving comparative aspects and examples, putting forward statements and conclusions.** | The answer is clear, deep logically structured and directly connected with question. Maintains consistent, clearly formulated answers to the questions posed, is able to connect theory with practice, illustrate with examples, facts, and scientific research data; makes interdisciplinary connections, proposals, conclusions. | The answer is structured, there are some inaccuracies (insignificant errors) in the presentation of theoretical and practical material; the answer is less thorough, deep, valid and complete. The results and conclusions are partially summarized. | The answer is not structured; answers to questions are presented in a chaotic order, without any logical relationship. There are no results or conclusions. | There is absolutely no logical connection in the answer. |
| **Presentation, Teamwork** | Excellent, attractive presentation, excellent quality of visuals, slides, materials, excellent teamwork. | Good engagement, good quality of visuals, slides or other materials, good level of teamwork. | Satisfactory level of involvement, satisfactory quality of materials, satisfactory level of teamwork. | Low level of involvement, low quality of materials, poor level of teamwork. |

**SIW 2: A group presentation «** **Main structural features of the organs of monocotyledonous and dicotyledonous plants » (15% of 100% MC)**

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| **Criterion** | **"Excellent"**  10-15 % | **"Good"**  8-10 % | **"Satisfactory"**  5-8 % | **"Unsatisfactory"**  0-15 % |
| **Understanding Theories**  **and basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.** | Deep understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Relevant and relevant links (citations) to key sources are provided. | Understanding theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Links (citations) to key sources are provided. | Limited understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Limited references (citations) to key sources are provided. | Superficial understanding / lack of understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Relevant references (citations) to key sources are not provided. |
| **Understanding the main structural features of the organs of monocotyledonous and dicotyledonous plants. Knowledge of the structure of the root, stem, leaf, flower of two classes. Possession of information about the performed functions of each vegetative and generative organ.** | Deep knowledge of the main structural features of the organs of monocotyledonous and dicotyledonous plants. Knows very well the structure of the root, stem, leaf, flower of two classes. Without difficulty he can explain the functions of each vegetative and generative organ.  Excellent justifies its answers with examples. | Partially knows information about the main structural features of the organs of monocotyledonous and dicotyledonous plants. Can distinguish some organs of monocots and dicots. May explain the significance of some functions of the vegetative and generative organs.  You can back up some of your answers with examples. | Limited understanding of the basic structural features of the organs of monocotyledonous and dicotyledonous plants. Cannot distinguish generative organs from vegetative ones. Confused about the explanation of their functions. Limited number of reasoned examples for answers. | Not understanding of the basic structural features of the organs of monocotyledonous and dicotyledonous plants. There is no logical connection in the answers, which are not supported by arguments and are not supported by examples. |
| **Consideration of the main provisions, giving comparative aspects and examples, putting forward statements and conclusions.** | The answer is clear, deep logically structured and directly connected with question. Maintains consistent, clearly formulated answers to the questions posed, is able to connect theory with practice, illustrate with examples, facts, and scientific research data; makes interdisciplinary connections, proposals, conclusions. | The answer is structured, there are some inaccuracies (insignificant errors) in the presentation of theoretical and practical material; the answer is less thorough, deep, valid and complete. The results and conclusions are partially summarized. | The answer is not structured; answers to questions are presented in a chaotic order, without any logical relationship. There are no results or conclusions. | There is absolutely no logical connection in the answer. |
| **Presentation, Teamwork** | Excellent, attractive presentation, excellent quality of visuals, slides, materials, excellent teamwork. | Good engagement, good quality of visuals, slides or other materials, good level of teamwork. | Satisfactory level of involvement, satisfactory quality of materials, satisfactory level of teamwork. | Low level of involvement, low quality of materials, poor level of teamwork. |

**SIW 3: A group presentation «Modifications of the anatomical structure of organs under the influence of phytohormones» (15% of 100% MC)**

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| **Criterion** | **"Excellent"**  10-15 % | **"Good"**  8-10 % | **"Satisfactory"**  5-8 % | **"Unsatisfactory"**  0-15 % |
| **Understanding Theories**  **and basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.** | Deep understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Relevant and relevant links (citations) to key sources are provided. | Understanding theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Links (citations) to key sources are provided. | Limited understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Limited references (citations) to key sources are provided. | Superficial understanding / lack of understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Relevant references (citations) to key sources are not provided. |
| **Understanding the influence of phytohormones on plant growth and development. Knowledge of the main classes of phytohormones. Study of modifications of the anatomical structure of organs under the influence of phytohormones. Awareness of the participation of phytohormones in different periods of the plant life cycle.** | Well understanding the influence of phytohormones on plant growth and development. Has excellent knowledge of the main classes of phytohormones (phytohormones - stimulants, phytohormones - inhibitors). Freely interprets modifications of the anatomical structure of organs under the influence of phytohormones. It easily explains the participation of phytohormones in different periods of the plant life cycle.  Excellently substantiates his answers, justifying them with examples. | Partially informing about the influence of phytohormones on plant growth and development. Can distinguish between some classes of phytohormones. There is a general understanding of modifications in the anatomical structure of organs under the influence of phytohormones. Understands the role of phytohormones only in some periods of the plant life cycle.  You can back up some of your answers with examples. | Limited understanding of the influence of phytohormones on plant growth and development. There is no understanding of the classification of phytohormones. There is no knowledge about the role of phytohormones in only some periods of the plant life cycle. Limited number of reasoned examples for answers. | No understanding of the influence of phytohormones on plant growth and development. There is no logical connection in the answers, which are not supported by arguments and are not supported by examples. |
| **Consideration of the main provisions, giving comparative aspects and examples, putting forward statements and conclusions.** | The answer is clear, deep logically structured and directly connected with question. Maintains consistent, clearly formulated answers to the questions posed, is able to connect theory with practice, illustrate with examples, facts, and scientific research data; makes interdisciplinary connections, proposals, conclusions. | The answer is structured, there are some inaccuracies (insignificant errors) in the presentation of theoretical and practical material; the answer is less thorough, deep, valid and complete. The results and conclusions are partially summarized. | The answer is not structured; answers to questions are presented in a chaotic order, without any logical relationship. There are no results or conclusions. | There is absolutely no logical connection in the answer. |
| **Presentation, Teamwork** | Excellent, attractive presentation, excellent quality of visuals, slides, materials, excellent teamwork. | Good engagement, good quality of visuals, slides or other materials, good level of teamwork. | Satisfactory level of involvement, satisfactory quality of materials, satisfactory level of teamwork. | Low level of involvement, low quality of materials, poor level of teamwork. |

**SIW 4: A group presentation «Practical significance of plants in medicine» (15% of 100% MC)**

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| **Criterion** | **"Excellent"**  10-15 % | **"Good"**  8-10 % | **"Satisfactory"**  5-8 % | **"Unsatisfactory"**  0-15 % |
| **Understanding Theories**  **and basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.** | Deep understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Relevant and relevant links (citations) to key sources are provided. | Understanding theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Links (citations) to key sources are provided. | Limited understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Limited references (citations) to key sources are provided. | Superficial understanding / lack of understanding of theories, basic principles of botany relating to the anatomy and morphology of plants, knowledge of professional terms and definitions.  Relevant references (citations) to key sources are not provided. |
| **Understanding the practical significance of plants in folk and official medicine. Knows the main families of medicinal plants. Use of medicinal plants for the preparation of drugs.** | Well understands the practical significance of plants in folk and official medicine. Deep knowledge of the main families of medicinal plants. Svobodny talks about the use of medicinal plants for the preparation of drugs. | Partially understands the practical significance of plants in folk and official medicine. Knows the main families of medicinal plants. To talk about the use of medicinal plants for the preparation of drugs. | Limited understands the practical significance of plants in folk and official medicine. Knows the main families of medicinal plants. To talk about the use of medicinal plants for the preparation of drugs. | No understanding the practical significance of plants in folk and official medicine. |
| **Consideration of the main provisions, giving comparative aspects and examples, putting forward statements and conclusions.** | The answer is clear, deep logically structured and directly connected with question. Maintains consistent, clearly formulated answers to the questions posed, is able to connect theory with practice, illustrate with examples, facts, and scientific research data; makes interdisciplinary connections, proposals, conclusions. | The answer is structured, there are some inaccuracies (insignificant errors) in the presentation of theoretical and practical material; the answer is less thorough, deep, valid and complete. The results and conclusions are partially summarized. | The answer is not structured; answers to questions are presented in a chaotic order, without any logical relationship. There are no results or conclusions. | There is absolutely no logical connection in the answer. |
| **Presentation, Teamwork** | Excellent, attractive presentation, excellent quality of visuals, slides, materials, excellent teamwork. | Good engagement, good quality of visuals, slides or other materials, good level of teamwork. | Satisfactory level of involvement, satisfactory quality of materials, satisfactory level of teamwork. | Low level of involvement, low quality of materials, poor level of teamwork. |

**Dean \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **Kurmanbayeva M.S.**

**Head of Department \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Kegenova G.B.**

**Teacher \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Zaparina Ye.G.**