**AL-FARABI KAZAKH NATIONAL UNIVERSITY**

**Medicine and Health Care Faculty**

**Higher School of Medicine**

**Department of Fundamental Medicine**

**Educational program by the specialty**

**6В10103 - «General Medicine»**

The schedule of IWS

by the discipline “Molecular Biology and Bioorganic Chemistry”

| **№** | **Tasks for IWS** | **The form of implementation of IWS** | **Deadline of IWS (study week)** |  |
| --- | --- | --- | --- | --- |
| 1 | Case study on topic: – Recombinant DNA Technology: The World Is about to Change  Make a sketch to show the process by which human insulin could be made by bacteria using recombinant DNA technology.  Students should draw a similar process to that given in the figure in the case, with the DNA strand labeled “insulin gene” and the protein labeled as “insulin protein.” | Case study | 5 week | 8 points |
| 2 | Gene therapy: myths and reality*.* The group of students is divided into two teams. The first team makes presentation “Gene therapy is a myth” (problems of gene therapy) and the second group makes presentation “Gene therapy is reality” (achievements of gene therapy) by scientific articles from PubMed(<https://www.ncbi.nlm.nih.gov/pubmed> ) for the last five years. Each team defends its position based on scientific facts. | presentation | 10 week | 6 points |

For implementation of **IWS** students can use study literature and scientific sources recommended in the course as well as found by themselves. The pass of **IWS** is strictly by the schedule. In the case of respectful reasons (by documental confirmation) **IWS** can be accepted out of the schedule.

**Response Quality Scale**

| **Mark** | **Criteria** | **Scale, points** |
| --- | --- | --- |
| Excellent | 1. all key aspects are included and presented logically;  2. high accuracy (relevance, without redundancy) and constant attention to the issue;  3. excellent integration of theoretical questions;  4. providing relevant examples;  5. in-depth analysis and theoretical justification of the problem (if applicable), all key aspects identified and interpreted;  6. fluency in professional terminology | 90 - 100 |
| Good | 1. all key aspects are included and presented logically;  2. constant focus on the issue with satisfactory accuracy, relevance, and / or some redundancy;  3. satisfactory integration of theoretical questions;  4. the lack of examples;  5. satisfactory analysis and theoretical justification of the problem (if applicable), most of the key aspects identified and interpreted;  6. correct use of professional terminology | 70 - 89 |
| Satisfactory | 1. most of the key aspects are included;  2. satisfactory focus on the question - some errors and / or noticeable redundancy;  3. theoretical problems presented without noticeable integration;  4. Providing failed examples or no examples;  5. some analysis and theoretical justification of this problem (if applicable), most of the key aspects are defined and interpreted;  6. correct use of professional terminology | 50 - 69 |
| Unsatisfactory (FX) | 1. most of the key aspects are omitted;  2. lack of attention to the issue-irrelevant and significant redundancy;  3. some theoretical problems presented without integration and understanding;  4. missing or outdated examples;  5. some analysis and theoretical justification of this problem (if applicable), most of the key aspects are omitted;  6. problems in using professional terminology | 25 - 49 |
| Unsatisfactory (F | 1. most or all of the key aspects are omitted;  2. no focus on the question, not much related to the issue of information;  3. significant gaps in theoretical questions, or their superficial consideration;  4. the lack of examples or irrelevant examples;  5. there is no analysis and no theoretical justification for the given problem (if applicable), most of the key aspects are omitted;  6. problems in using professional terminology | 0-24 |