

**Attestation procedure
in the discipline "Biochemistry"
for students of the educational program
specialist degree
in the specialty of training 31.05.01 General medicine,
direction (profile) General medicine,
form of study full - time
for the 2023-2024 academic year**

The final rating for the discipline (Rd) is calculated using the following formula:

$$Rd = (Rdsr + Rpa) / 2$$

where Rd is the rating for the discipline

Rpa – intermediate certification rating (exam)

Rdsr – average discipline rating for the second and third semesters – individual assessment of the assimilation of the discipline in points for two semesters of study.

The average rating of the discipline for 2 semesters of study is calculated according to the following formula:

$$Rdsr = (Rpred2 + Rpred3) / 2$$

where:

Rpred2 is the rating for the discipline in the 2nd semester preliminary

Rpred3 – the rating of the discipline in the 3rd semester is preliminary

The rating for the discipline in the 2nd and 3rd semesters is preliminary calculated according to the following formula:

$$Rpred = (Rtec \text{ current} + Rtest) / 2 + Rb - Rsh \text{ penalty}$$

where:

Rtec is the current rating for the second or third semester (current academic performance, which is assessed according to the average score, taking into account the assessment for independent work).

Rtest is the rating for testing in the second or third semester.

Rb – bonus rating

Rsh – penalty rating

The maximum number of points that a student can receive in a discipline in a semester is 100.

The minimum number of points at which the discipline should be credited is 61.

1. The method of calculating the average score of current academic performance

The rating score for the discipline (Rtec) is evaluated in total, taking into account the current academic performance, the assessment of which is carried out according to the average score, taking into account the assessment for independent work.

The student's knowledge and work in practical classes are evaluated by the teacher in each semester according to the classical 5-point system.

Independent work of students includes independent study of individual topics provided by the work program. The reporting form of students is filling out tables according to the sample, preparing a report. Each topic of independent work is evaluated from 3 to 5 points, work rated below 3 points is not counted and requires completion by the student (Table 1).

At the end of each semester, a centralized calculation of the student's average academic performance is performed, in the semester with its transfer to a 100-point system (Table 2).

Table 1. Calculation points for independent work of students

Evaluation criteria	Rating score
The work has not been completed, it has not been completed in full, the work does not correspond to the subject of independent work.	0-2

The work was submitted in full, but it made more than 2 rough thematic mistakes or missed more than 1 key question of the topic of independent work.	3
The work has been submitted in full, but 1-2 rough thematic errors have been made in it or 1 key question of the topic of independent work has been missed.	4
The work has been completed in full, there are no rough thematic errors in it, the key issues of the topic of independent work have not been missed.	5

Table 2. Transfer of the average score of the student's current academic performance to a rating score according to a 100-point system

Average score on a 5-point system	Score on a 100-point system	Average score on a 5-point system	Score on a 100-point system	Average score on a 5-point system	Score on a 100-point system
5.0	100	4.0	76-78	2.9	57-60
4.9	98-99	3.9	75	2.8	53-56
4.8	96-97	3.8	74	2.7	49-52
4.7	94-95	3.7	73	2.6	45-48
4.6	92-93	3.6	72	2.5	41-44
4.5	91	3.5	71	2.4	36-40
4.4	88-90	3.4	69-70	2.3	31-35
4.3	85-87	3.3	67-68	2.2	21-30
4.2	82-84	3.2	65-66	2.1	11-20
4.1	79-81	3.1	63- 64	2.0	0-10
		3.0	61-62		

2. The methodology of scoring points for testing in the semester

The minimum number of points that can be obtained during testing is 61, the maximum is 100 points.

For a correctly completed task, the test taker receives 1 (one) point, for an incorrectly completed task – 0 (zero) points. Evaluation of the results after passing the test is carried out in accordance with Table 3.

The test is considered completed when receiving 61 points or higher. If you get less than 61 points, you need to retake the test.

Table 3. Translation of the test result into a rating score according to a 100-point system

The number of mistakes made when answering 100 test tasks	% of the completion of the test task	Rating score according to the 100-point system
0 - 9	91-100	91-100
10 - 19	81-90	81-90
20 - 29	71-80	71-80
30 - 39	61-70	61-70
≥ 40	0-60	0

3. Methodology for calculating the intermediate certification score (exam) (Rpa)

Intermediate certification in the discipline is carried out in the form of an exam. The exam takes place in the form of an interview with an assessment of the formation of the practical component of the competencies being formed, which includes questions on all the studied sections of the program. The minimum number of points (Rpa) that can be obtained during an interview is 61, the maximum is 100 points (Table 4).

Table 4. Criteria for assessing the level of assimilation of discipline material and the formation of competencies

Response characteristics	ECTS assessment	Scores in BRS	Level of competence formation in the discipline	Assessment on a 5-point scale
<p>A complete, detailed answer to the question is given, a set of conscious knowledge about the object is shown, manifested in the free operation of concepts, the ability to distinguish its essential and non-essential signs, cause-and-effect relationships. Knowledge about the object</p> <p>it is demonstrated against the background of understanding it in the system of this science and interdisciplinary connections. The answer is formulated in terms of science, presented in literary language, logical, evidential, demonstrates the author's position of the student. The student demonstrates a high advanced level of competence formation</p>	A	100–96	high	5 (5+)
<p>A complete, detailed answer to the question is given, the totality of conscious knowledge about the object is shown, the main provisions of the topic are evidently disclosed; a clear structure, logical sequence is traced in the answer, reflecting the essence of the disclosed concepts, theories, phenomena. Knowledge about the object is demonstrated against the background of understanding it in the system of this science and interdisciplinary connections. The answer is presented in literary language in terms of science. There may be shortcomings in the definition of concepts, corrected by the student himself in the process of answering. The student demonstrates a high level of competence formation.</p>	B	95-91	high	5
<p>A full, detailed answer to the question is given, the ability to identify essential and non-essential signs, cause-and-effect relationships is shown. The answer is clearly structured, logical, presented in literary language in terms of science. There may be shortcomings or minor errors corrected by the student with the help of the teacher. The student</p>	C	90-81	average	4

demonstrates an average increased level of competence formation.				
A full, detailed answer to the question is given, the ability to identify essential and non-essential signs, cause-and-effect relationships is shown. The answer is clearly structured, logical, stated in terms of science. However, minor mistakes or shortcomings were made, corrected by the student with the help of "leading" questions from the teacher. The student demonstrates an average sufficient level of competence formation.	D	80-76	average	4 (4-)
A complete but insufficiently consistent answer to the question is given, but at the same time the ability to identify essential and non-essential signs and cause-and-effect relationships is shown. The answer is logical and stated in terms of science. There may be 1-2 mistakes in the definition of basic concepts, which the student finds it difficult to correct independently. The student demonstrates a low level of competence formation.	E	75-71	low	3 (3+)
An insufficiently complete and insufficiently detailed answer is given. The logic and sequence of the presentation have violations. Mistakes were made in the disclosure of concepts, the use of terms. The student is not able to independently identify essential and non-essential signs and cause-and-effect relationships. A student can concretize generalized knowledge by proving their main points by examples only with the help of a teacher. Speech design requires corrections, corrections. The student demonstrates an extremely low level of competence formation.	E	70-66	low	3
An incomplete answer is given, the logic and sequence of presentation have significant violations. Gross mistakes were made in determining the essence of the disclosed concepts, theories, phenomena, due to students' misunderstanding of their essential and non-essential features and connections. There are no conclusions in the response. The ability to reveal specific manifestations of generalized knowledge is not shown. Speech design requires corrections, corrections.	E	65-61	threshold	3 (3-)

The student demonstrates the threshold level of competence formation.				
An incomplete answer is given, which represents scattered knowledge on the topic of the question with significant errors in definitions. There is fragmentary, illogical presentation. The student is not aware of the connection of this concept, theory, phenomenon with other objects of the discipline. There are no conclusions, concretization and evidence-based presentation. The speech is illiterate. Additional and clarifying questions from the teacher do not lead to correction of the student's answer not only to the question posed, but also to other questions of the discipline. There is no competence.	Fx	60-41	competence missing	2
No answers were received on the basic questions of the discipline. The student does not demonstrate indicators of achieving the formation of competencies. There is no competence.	F	40-0	competence missing	2

4. Bonus and penalty system

This rating score calculation model provides bonuses that increase the rating score and penalties that lower the rating, according to the table below (Table 5).

Table 5. Bonuses and penalties for discipline

Bonuses	title	Points
UIRS	Educational and research work on the topics of the studied subject	up to + 5,0
NIRS	Certificate of the participant of the SNO department of the 1st degree	+ 5.0
	Certificate of the participant of the SNO of the department of the 2nd degree	+ 4.0
	Certificate of the participant of the SNO of the department of the 3rd degree	+ 3.0
	Certificate of the participant of the SNO of the department of the 4th degree	+ 2.0
	Certificate of the participant of the SNO of the department of the 5th degree	+ 1.0
Penalties	title	Points
Disciplinary	omission of lectures or practical classes without a valid reason	- 2.0
	Systematic lateness to lectures or practical classes	- 1.0
	Performing independent work not on time	- 1.0

	Violation of TB	- 2.0
Causing material damage	Damage to equipment and property	- 2.0

The final grade that the teacher puts in the record book is the final rating for the discipline (Rd), translated into a 5-point system (Table 6).

Table 6. The final grade for the discipline

Assessment according to the 100-point system	Assessment according to the system "credited - not credited"	Assessment according to the 5-point system		Assessment according to ECTS
96-100	counted	5	excellent	A
91-95	counted			B
81-90	counted	4	good	C
76-80	counted			D
61-75	counted	3	satisfactory	E
41-60	not credited	2	unsatisfactory	Fx
0-40	not credited			F

Considered at the meeting of the department of Theoretical biochemistry with a course of clinical biochemistry "10" May 2023, protocol № 16

Head of the Department



O.V. Ostrovskij.