**Certification procedure
in discipline "Medical and Biological Physics"
for students of 2025 year of admission
under the educational programme
33.05.01 Pharmacy,
specialisation (profile) Pharmacy major (specialty),
(Bachelor's/Specialist's/Master's degree),
form of study full-time
for the 2025-2026 academic year.**

1. General principles for calculating the rating for a discipline

The rating for a discipline is an individual assessment of the student's study of the discipline, which consists of the rating for the entire period of study of the discipline (preliminary rating) and the rating of the midterm assessment.

2. Calculation of preliminary rating components

2.1 General principles

The discipline is studied over the course of one semester (the second), therefore the preliminary rating for the discipline for the entire period of study (Rprev) corresponds to the semester rating of the discipline in the second semester (Rsem):

$$Rprev = Rsem$$

The semester rating of a course is calculated using the formula:

$$Rsem = (Rtek + Rsro) / 2 + Rb – Rsh$$

where Rtek is the current rating for the discipline,
Rsro – rating of independent work of a student within the framework of a discipline,
Rb – bonus rating,
Rsh – rating of fines.

2.2. Calculation of the current rating in the semester

The current rating in the semester (Rtek) is calculated as the arithmetic mean of all grades received by the student during the semester of studying the discipline when completing the tasks of the current monitoring of academic performance, whichinclude the following types of tasks: testing, solving situational problems, a test, an interview on test questions, and an assessment of the acquisition of practical skills (abilities).

The completion of assignments is assessed by the teacher at each seminar-type lesson based on the criteria presented below (Table 1) on a classic 5-point scale, where:
2 – unsatisfactory;
3 – satisfactory;
4 – good;
5 – excellent.

Table 1

Criteria for the forms of current certification used

Task type	Criteriaand assessments	Rating on a 5-point scale			
		5	4	3	2
Testiration	• Percentage of correct answers	91-100	76-90	61-75	< 61

Solving situational problems	• The correctness of the answer received	loyal	loyal	partially true	incorrect
	• The presence, completeness and correctness of the justification for the response received	substantiated without comments	substantiated with comments	partially justified	there is no justification
Test	• The accuracy of the answers received	loyal	loyal	partially loyal	incorrect
	• Availability, completeness and correctness of the justification for the answers received	substantiated without comments	substantiated with comments	partially justified	-
Interview on control questions	• Correctness of the answer	loyal	loyal	partially true	incorrect
	• Completeness of the answer	full	quite complete	incomplete	incomplete
	• Structure and logic of the answer	structured, logical	mostly structured, logical	poorly structured, logic is broken	unstructured, fragmented, chaotic
Assessment of the acquisition of practical skills (abilities)	• Knowledge of the theoretical foundations of skill performance	knowledge	knowledge	uncertain knowledge	lack of knowledge
	• Compliance with the technique of performing the skill and the success of the result	compliance, successful outcome	compliance with minor inaccuracies, successful outcome	performing a skill only after correction by the teacher, successful result	an attempt to perform a skill that does not lead to a successful result, a refusal to perform a skill
	• Confidence and stability in skill performance	confidence and stability	lack of confidence in the face of overall stability	lack of confidence, repetition of errors when reproducing a skill	

At the end of the semester, Rtek is calculated and the calculated value is converted into a 100-point scale according to Table 3.

The absence of current debt is considered to be an Rtek value of more than 61 points.

2.3. Calculation of the student's independent work rating in the semester (Rsro)

The SRO rating for a semester corresponds to the student's grade for completing the SRO e-learning course for a given subject on the Volgograd State Medical University's electronic information and educational portal. One semester of study for a subject includes completing one SRO e-learning course.

The SRO is assessed based on the criteria presented below (Table 2) using a classic 5-point scale, where:

2 – unsatisfactory;

3 – satisfactory;

4 – good;

5 – excellent.

Table 2

SRO evaluation criteria

Task type	Criteria and assessments	Rating on a 5-point scale			
		5	4	3	2
Self-regulatory organization in the form of an electronic course at the Volgograd State Medical University	• Compliance Withdates of work completion	observed	observed	observed	not observed
	• Completeness of study of material that is not subject to assessment (viewing presentations, videos)	studied fully	studied fully	studied fully	studied not completely
	• Completion of tasks of the evaluation parts of the EUC and the control section	> 4.50	4.00 – 4.49	3.00 – 3.99	< 3.00

At the end of each study, the student's R is calculated and the calculated value is converted into a 100-point scale according to Table 3.

The absence of current debt is considered to be an Rsro value of more than 61 points.

2.4. Conversion of the current rating and the SRO rating into a score on a 100-point system

At the end of the semester, the student's current rating and SRO rating, calculated on a 5-point scale, are converted into a score on a 100-point scale. The conversion is performed according to Table 3.

Table 3

Conversion to a rating point on a 100-point system

Average score on a 5-point scale	Score on a 100-point scale	Average score on a 5-point scale	Score on a 100-point scale	Average score on a 5-point scale	Score on a 100-point scale	Average score on a 5-point scale	Score on a 100-point scale
5.00	100	3.45	70	2.48	40	2.09	10
4.95	99	3.40	69	2.46	39	2.08	9
4.90	98	3.35	68	2.44	38	2.07	8
4.85	97	3.30	67	2.42	37	2.06	7

4.80	96	3.25	66	2.40	36	2.05	6
4.75	95	3.20	65	2.38	35	2.04	5
4.70	94	3.15	64	2.36	34	2.03	4
4.65	93	3.10	63	2.34	33	2.02	3
4.60	92	3.05	62	2.32	32	2.01	2
4.5	91	3.00	61	2.30	31	2.00	1
4.47	90	2.98	60	2.29	30		
4.43	89	2.95	59	2.28	29		
4.40	88	2.93	58	2.27	28		
4.37	87	2.90	57	2.26	27		
4.33	86	2.88	56	2.25	26		
4:30	85	2.85	55	2.24	25		
4.27	84	2.83	54	2.23	24		
4.23	83	2.80	53	2.22	23		
4.20	82	2.78	52	2.21	22		
4.17	81	2.75	51	2.20	21		
4.13	80	2.73	50	2.19	20		
4.10	79	2.70	49	2.18	19		
4.07	78	2.68	48	2.17	18		
4.03	77	2.65	47	2.16	17		
4.00	76	2.63	46	2.15	16		
3.90	75	2.60	45	2.14	15		
3.80	74	2.58	44	2.13	14		
3.70	73	2.55	43	2.12	13		
3.60	72	2.53	42	2.11	12		
3.50	71	2.50	41	2.10	11		

2.5. Bonus and Penalty Rating

Bonuses and penalties are assessed on a 100-point scale. Bonus and penalty criteria are presented in Table 4.

Table 4

Bonuses and penalties for discipline

Bonuses	Name	Points
UIRS	Educational research work on the topics of the subject being studied	up to + 5.0
Research and development work	Certificate, diploma, etc. of a participant in the International Scientific Education Department	up to + 5.0
Fines	Name	Points
Disciplinary	Absence from a lecture or practical lesson without a valid reason	- 2.0
	Failure to complete assignments during practical classes	- 2.0

	Systematic lateness to lectures or practical classes	- 1.0
	Violation of safety regulations	- 2.0
Causing material damage	Damage to equipment and property	- 2.0

3. Calculation of the midterm assessment rating

Interim assessment for the discipline is carried out in the form of a test and includes an interview.

The assessment of the level of development of the necessary competencies in the student is carried out on a 100-point scale according to the criteria of Table 5.

Table 5

Criteria for assessing the level of assimilation of the discipline material and the development of competencies

Response characteristics	Grade ECTS	Points in BRS	Level of development of competence in the discipline
A complete, detailed answer to the question is provided, demonstrating a comprehensive understanding of the subject, manifested in the fluent use of concepts, the ability to identify its essential and non-essential features, and cause-and-effect relationships. Knowledge of the subject is demonstrated against the backdrop of its understanding within the framework of the given science and its interdisciplinary connections. The answer is formulated in scientific terms, presented in literary language, is logical, evidence-based, and demonstrates the student's original position. The student demonstrates a high, advanced level of competence. The midterm assessment has been passed.	A	100-96	HIGH
A complete, detailed answer to the question posed is provided, demonstrating the student's conscious knowledge of the subject, and convincingly explaining the main concepts of the topic. The answer displays a clear structure and logical sequence, reflecting the essence of the concepts, theories, and phenomena being explored. Knowledge of the subject is demonstrated against the backdrop of its understanding within the framework of the given science and its interdisciplinary connections. The answer is presented in literary language, using scientific terminology. Deficiencies in definitions of concepts may be present, but the student corrects them independently during the answer process. The student demonstrates a high level of competence development. Midterm assessment has been passed.	B	95-91	
A complete, detailed answer to the question was provided, demonstrating the ability to identify essential and nonessential features and cause-and-effect relationships. The answer is clearly structured, logical, and presented in literary language using scientific terminology. There may be some shortcomings or minor errors, which the student corrected with the teacher's assistance. The student demonstrates an average, advanced level of competence. The midterm assessment has been passed.	C	90-81	AVERAGE

A complete, detailed answer to the question was provided, demonstrating the ability to identify essential and nonessential characteristics and cause-and-effect relationships. The answer is clearly structured, logical, and presented in scientific terms. However, minor errors or omissions were made, which the student corrected with the help of the instructor's probing questions. The student demonstrates an average, sufficient level of competency development. The midterm assessment has been passed.	D	80-76	
The answer to the question was complete but not entirely consistent, demonstrating the ability to identify essential and nonessential characteristics and cause-and-effect relationships. The answer is logical and presented in scientific terms. One or two errors in defining key concepts may be present, which the student has difficulty correcting independently. The student demonstrates a low level of competence development. The midterm assessment has been passed.	E	75-71	SHORT
The answer provided is insufficiently comprehensive and incomplete. The logic and sequence of presentation are flawed. Errors were made in the definition of concepts and the use of terms. The student is unable to independently identify essential and nonessential features and cause-and-effect relationships. The student can only concretize generalized knowledge, demonstrating its main points with examples, with the help of the teacher. The student's speech requires correction and adjustment. The student demonstrates an extremely low level of competence development. The midterm assessment has been passed.	E	70-66	
The answer provided is incomplete, with significant flaws in the logic and sequence of presentation. Significant errors were made in defining the essence of the concepts, theories, and phenomena being discussed, due to the student's lack of understanding of their essential and nonessential characteristics and relationships. The answer lacks conclusions. The ability to identify specific manifestations of generalized knowledge is not demonstrated. The student's verbal presentation requires correction and adjustment. The student demonstrates a threshold level of competency development. The midterm assessment has been passed.	E	65-61	THRESHOLD
The answer provided is incomplete, representing fragmented knowledge on the topic of the question with significant definitional errors. The presentation is fragmentary and illogical. The student does not understand the connection between this concept, theory, or phenomenon and other subjects covered in the course. Conclusions, specificity, and evidence are lacking. Speech is illiterate. Additional and clarifying questions from the teacher do not lead to a correction of the student's answer, not only to the question posed but also to other questions in the course. Competence is absent. The midterm assessment has not been passed.	Fx	60-41	COMPETENCE ABSENT
No answers were received to the course's core questions. The student does not demonstrate indicators of competency development. Competency is absent. Midterm assessment failed.	F	40-0	

4. Calculation of the final rating for the discipline

The final grade for the course (Rd) is calculated using the formula:

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

The final grade, calculated on a 100-point scale, is converted into a pass/fail system according to Table 6.

Table 6

Final grade for the course

Rating on a 100-point scale	Rating by system "passed - failed"	ECTS assessment
100-96		A
95-91		B
90-81		C
80-76	Passed	D
75-71		
70-66		E
65-61		
60-41	Not accepted	Fx
40-0		F

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