

**CRITERIA AND EVALUATION ORDER OF EDUCATIONAL  
OUTCOMES OF THE EDUCATIONAL COMPONENT “MEDICAL  
AND ANALYTICAL TOXICOLOGY”**

*Points from the educational component are calculated according to this  
ratio*

<b>Types of evaluation</b>	<b>Maximum number of points (% of the number of points per module - for content modules)</b>
<b>Module 1. Medical and Analytical Toxicology</b>	
<p><b>Content module 1. Medical Toxicology.</b></p> <ul style="list-style-type: none"> <li>- evaluation of topics (1-3) (work in classes 1-3): work in classes (oral survey, writing test tasks, solving situational problems);</li> <li>- supervision of content module 1 (writing test tasks, solving situational problems).</li> </ul>	20 (20 %)
<p><b>Content module 2. Analytical toxicology. Chemicotoxicological analysis of drugs.</b></p> <ul style="list-style-type: none"> <li>- evaluation of topics (4-12) (work in classes 4-11): work in classes (oral survey, writing test tasks, solving situational problems);</li> <li>- supervision of content module 2 (writing test tasks, solving situational problems).</li> </ul>	40 (40 %)
<p align="center"><b>Content module 3. Chemicotoxicological analysis of volatile substances and heavy metal compounds.</b></p> <p><b>Analytical diagnostics of toxic gas poisonings.</b></p> <p>evaluation of topics (13-15) (work in classes 12-18): work in classes (oral survey, writing test tasks, solving</p>	40 (40 %)

situational problems); - supervision of content module 2 (writing test tasks, solving situational problems).	
<b>Semester Supervision of Module 1</b>	100

Evaluation system of the educational component: The results of the semester supervision in the form of a semester credit are evaluated on a 100-point, non-differentiated scale ("passed", "failed") and on the ECTS scale.

Progress supervision: oral survey, writing test tasks, solving situational problems.

Supervision of content modules: preparation of test tasks, solution of situational problems.

Semester exam: (not provided)

Semester control form: semester credit.

Conditions for admission to the supervision of content modules: For admission to the supervision of content module 1 and 2, it is necessary to have a minimum number of points for the topics (classes) of content module 1 and 2.

Conditions for admission to semester supervision: A current rating of more than 60 points, absence of missed laboratory classes, fulfillment of all requirements stipulated in the work program of the educational component.

### Grading Scheme for progress supervision

Modules required points							Semester credit	Total
Content modules								
Content module 1			Content module 2		Content module 3			
P.L. 1	P.L. 2	P.L. 3 <i>Final test of CM 1 assimilation</i>	P.L. 4-9	P.L. 10 <i>Final test of CM 2 assimilation</i>	P.L. 11-16	P.L. 17 <i>Final test of CM 3 assimilation</i>	-	<b>100</b>
1-2	1-2	1-2+ 9-14	2-3	12-22	2-3	12-22		
12-20			24-40		24-40			

## The academic activities during the laboratorial lessons

practical lessons No	Points	Criteria
P.L. N 1–16	max (2; 3)	Are given to the such student who performed practical work deals with the description of the toxicological characteristics of particular groups of medicine in detail and correctly, answered for homework questions and filled a laboratory journal.
	min (1; 2)	Are given to the such student who performed practical work deals with the description of the toxicological characteristics of particular groups of medicine correctly, filled a laboratory journal, but answered for homework questions with significant mistakes or incorrectly.

Non-differentiated scale	Scale ECTS	Rating estimation, points
passed	A-fine	90-100
passed	B-very well	82-89
passed	C-well	74-81
passed	D-satisfactorily	64-73
passed	E-sufficiently (satisfies minimum criteria)	60-63
failed	FX- unsatisfactory	35-59
failed	F- unsatisfactory (necessary additional work)	1-34

Rating estimations as **FX**, **F** are proposed to the students is not passed the discipline module after completion of its learning.

Rating estimation as **FX** is proposed to the students obtained the least of points as a result of current control, but not passed the final module control. Such students have a right to retaking of the module control by the schedule ratified by dean's office.

Rating estimation **F** is proposed to the students, attended all audience classes of the discipline, but they did not obtain the enough amount of points as a result of current control and they are not admitted to the final module control. This category of students has a right to the repeated study of the module.

## Content Module 1

### Criteria for the evaluation student's knowledge and skills

*The test is given during the last laboratory class according to the corresponding thematic module.*

Only those students who have performed all the works given in the educational program are allowed to pass the test (reworked all the laboratory classes).

Methods of the diagnostics of the student's preparation level are theoretical written question. **Maximal mark for the thematic modules No 1 is 14, minimal positive mark is 9.**

*Test structure:*

- ✓ **2 theoretical questions:** correct answer for the 1-st question is evaluated from 0 until 7 points (see Table 1); correct answer for the 2-nd question is evaluated from 0 until 7 points (see Table 1);

Table 1

Points	Criteria
13–14	Are given to the such student who gave the correct definitions of the terms in the first question.
9 – 12	Are given to the such student who gave the correct definitions of the terms in the first question, but with insignificant mistake (mistakes) that does not distort the essence of the questions.
5 – 8	Are given to the such student who gave the definitions of the terms in the first question, but with significant mistake (mistakes) which indicates the student's lack of understanding the essence of the questions.
0 – 4	Are given to the such student who gave the incorrect definitions of the terms in the first question.

Table 2

Points	Criteria
13–14	Are given to the such student who gave the truthful toxicological characteristics of the specified drug in the second question.
9 – 12	Are given to the such student who gave the truthful toxicological characteristics of the specified drug in the second question, but with insignificant mistake (mistakes) that does not distort the essence of the questions.
5 – 8	Are given to the such student who gave the truthful toxicological characteristics of the specified drug in the second question, but with significant mistake (mistakes) which indicates the student's lack of understanding the essence of the questions.

0 – 4	Are given to the such student who gave the truthful toxicological characteristics of the specified drug in the second question, but with significant mistake (mistakes) which indicates the student's lack of understanding the essence of the questions.
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## THE CONTENT MODULE CONTROL No 2

*The test is given during the last laboratory class according to the corresponding content module.*

Only those students who have performed all the works given in the educational program are allowed to pass the test (reworked all the laboratory classes).

Methods of the diagnostics of the student's preparation level are multiple choice questions and theoretic written testing. **Maximal mark for the thematic modules No 2 is 22, minimal positive is 12.**

*Test structure:*

- ✓ **1 theoretic question:** correct answer for a question is evaluated from 0 until 4 points (see Table 1);
- ✓ **1 practical task:** is evaluated from 0 until 6 points (see Table 2).
- ✓ **12 multiple choice questions,** one correct answer equals 1 points:  $12 \times 1 = 12$  points;

Table 1

Points	Criteria
4	Are given to the such student who correctly indicated the reaction (reactions), correctly wrote equation (equations) of the chemical reaction (reactions).
3	Are given to the such student who correctly indicated the reaction (reactions), wrote equation (equations) of the chemical reaction (reactions), but wrote some chemical formula (formulas) with insignificant mistake (mistakes) that does not distort the essence of the chemical reaction occurring.
2	Are given to the such student who correctly indicated the reaction (reactions), wrote equation (equations) of the chemical reaction (reactions), but wrote some chemical formulas with significant mistakes which indicate the student's lack of understanding the chemical reaction occurring.
1	Are given to the such a student who correctly indicated the reaction (reactions), but did not write equation (equations) of the chemical reaction (reactions).

Table 2

Points	Criteria
6	Are given to the such a student who performed the practical algorithm for the chemical toxicological analysis of a particular toxicant correctly, sample

	preparation, screening and identification, wrote the equations of all chemical reactions, indicated physicochemical methods of the analysis, methods of quantitative determination of a poisonous substance.
5-4	Are given to the such a student who performed the practical algorithm for the chemical toxicological analysis of a particular toxicant correctly, sample preparation, screening and identification, wrote the equations of all chemical reactions with slight mistakes, indicated physicochemical methods of the analysis incompletely, methods of quantitative determination of a poisonous substance incompletely.
3-2	Are given to the such a student who performed the practical algorithm for the chemical toxicological analysis of a particular toxicant correctly, sample preparation, screening and identification, did not write the equations of the chemical reactions, indicated physicochemical methods of the analysis incompletely, methods of quantitative determination of a poisonous substance incompletely.
1-0	Are given to the such a student who performed the practical algorithm for the chemical toxicological analysis of a particular toxicant incompletely, indicated sample preparation method with inaccuracies, screening method with inaccuracies, indicated chemical reactions incompletely, did not write the equations of these reactions, did not indicate any physicochemical method of the analysis, did not indicate any method of quantitative determination of a poisonous substance.

### Content Module 3

#### Criteria for the evaluation student's knowledge and skills

*The test is given during the last laboratory class according to the corresponding content module.*

Only those students who have performed all the works given in the educational program are allowed to pass the test (reworked all the laboratory classes).

Methods of the diagnostics of the student's preparation level are multiple choice questions and theoretic written testing. **Maximal mark for the thematic modules No. 3 is 22, minimal positive is 9.**

*Test structure:*

- ✓ **1 theoretical question:** correct answer for a question is evaluated from 0 until 4 points (see Table 1);
- ✓ **1 practical task:** is evaluated from 0 until 6.0 points (see Table 2).

✓ **12 multiple choice questions**, one correct answer equals 0.5 points: 12×1 = 12 points;

Table 1

Points	Criteria
4	Are given to the such student who correctly indicated the reaction (reactions), correctly wrote equation (equations) of the chemical reaction (reactions).
3	Are given to the such student who correctly indicated the reaction (reactions), wrote equation (equations) of the chemical reaction (reactions), but wrote some chemical formula (formulas) with insignificant mistake (mistakes) that does not distort the essence of the chemical reaction occurring.
2	Are given to the such student who correctly indicated the reaction (reactions), wrote equation (equations) of the chemical reaction (reactions), but wrote some chemical formulas with significant mistakes which indicate the student's lack of understanding the chemical reaction occurring.
1	Are given to the such a student who correctly indicated the reaction (reactions), but did not write equation (equations) of the chemical reaction (reactions).

Table 2

Points	Criteria
6	Are given to the such a student who performed the practical algorithm for the chemical toxicological analysis of a particular toxicant correctly, sample preparation, screening and identification, wrote the equations of all chemical reactions, indicated physicochemical methods of the analysis, methods of quantitative determination of a poisonous substance.
5	Are given to the such a student who performed the practical algorithm for the chemical toxicological analysis of a particular toxicant correctly, sample preparation, screening and identification, wrote the equations of all chemical reactions with slight mistakes, indicated physicochemical methods of the analysis incompletely, methods of quantitative determination of a poisonous substance incompletely.
4-3	Are given to the such a student who performed the practical algorithm for the chemical toxicological analysis of a particular toxicant correctly, sample preparation, screening and identification, did not write the equations of the chemical reactions, indicated physicochemical methods of the analysis incompletely, methods of quantitative determination of a poisonous substance incompletely.
2-0	Are given to the such a student who performed the practical algorithm for the chemical toxicological analysis of a particular toxicant incompletely, indicated sample preparation method with inaccuracies, screening method with

inaccuracies, indicated chemical reactions incompletely, did not write the equations of these reactions, did not indicate any physicochemical method of the analysis, did not indicate any method of quantitative determination of a poisonous substance.
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It has been considered and approved at the Department meeting  
of Medicinal Chemistry

Record from «23» August 2023 № 1

Head of the Department



(sig.)

prof. Lina PERECHODA

(first name LAST NAME)