

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
LVIV POLYTECHNIC NATIONAL UNIVERSITY**

Approved by
Rector of Lviv
Polytechnic National
University
Yu. Bobalo
Order № 27-1-10 of
23/01/2019 13, 2021

Standards for quality assurance in
educational activity and higher education standards
(HES LP 03.10)

Regulations on the Rating of Student Achievement

Approved by
Scientific Council of
Lviv Polytechnic National University
Order # 50 of 20/12/2018

The purpose of rating assessment of student achievement is to stimulate their systematic work and acquisition of relevant competencies, to ensure the objectivity of assessment, to introduce competition between students in learning, encourage them to active, purposeful learning, self-mastery, identification and development of their creative abilities, self-realization based on the principles of academic freedom of educational process participants.

1. The concept of Regulations

1.1. The system of students achievements assessment at Lviv Polytechnic National University (hereinafter - the System) is a part of educational process organization in the context of Ukraine's higher education integration into the European higher education space based on the principles of preserving and developing the achievements and traditions of both the Ukrainian higher education institutions and Lviv Polytechnic National University (hereinafter referred to as the University).

1.2. The basic principles of the System are:

- the increase of objectivity in assessing students learning outcomes by conducting current and semester tests during the semester and applying a 100-point scale to assess the integrated knowledge and skills of students in each component of the educational program with their further transference to the national scale of assessment "excellent", "good", satisfactory "or" unsatisfactory ") in accordance with Table 1 and Appendix 1;
- the improvement of the quality of training and competitiveness of specialists by stimulating systematic and independent work of students during the semester, establishing constant feedback with each student and timely adjustment of his/her individual educational trajectory;
- ensuring students' mobility through transparency and compatibility of the System with the similar systems of other countries and the application of the European Credit Transfer System (hereinafter - ECTS);
- providing an individually oriented, student-centered learning process;
- identifying and developing students' creative abilities, motivating students to study, introducing competition in learning, providing opportunities for individual self-realization by the systematic control of knowledge and accumulation of students' scores for educational and research activities, deepening and consolidating their knowledge;
- application of semester ratings both for appointing and calculating the amount of student scholarships, the appointment of personal scholarships and additional incentives for students (bonuses, discounts on vouchers to sports and health resorts of

the University, priority in obtaining vouchers for rehabilitation during the holidays, etc.) at the expense of 10% of the scholarship fund;

- assessment and consideration of scientific and educational achievements of students in determining their competitive ratings;
- application of students’ ratings to establish their priorities in the transition from one bachelor's program to another (related) one and the choice of specialty and specialization, in competitive selection for a master's degree program, student’s ratings are also considered as a basis for applying for postgraduate study, study, training or internship abroad, employment at enterprises, organizations or institutions, etc.

Table 1

Institutional scale of University students’ achievement assessment

In a 100-point scale of the University	In national scale
100-88 points	Certified, grade “excellent”
87-71 points	Certified, grade “good”
70-50 points	Certified, grade “satisfactory”
49-26 points	Not certified
25-00 points	Not certified, grade “unsatisfactory”

1.3. The transfer of the results of students’ assessment achievements who participated in international academic mobility programs is carried out in the following sequence:

- to determine the control samples of the results of students achievements assessment of a certain specialty for the previous two-three years and based on these results to create the table of statistical data;
- to calculate the absolute number of students who received the appropriate grades in the national rating scale, i.e. performing the groups clustering - all students who received “excellent” – belong to group № 1, “good” - group № 2, “satisfactory” - group № 3.
- to calculate the percentage of students in each of the groups to the total number of students who received grades in the national scale, and the cumulative percentage - the cumulative total (example of Table 2);
- to make a transfer to another scale by comparing the percentage of students in the same specialty.

Table 2

An example of forming a table of ECTS grades

Grades in national scale of grades	The total number of control persons groups	The share of control persons groups,%	Cumulative percentage, %

“excellent”	30	15	15
“good”	70	35	50
“satisfactory”	100	50	100
Total	200	100	

1.4. The results of the evaluation of students achievements who participated in the international academic mobility programs are transferred from the national scale into a 100-point scale on the average value of each of the evaluation intervals, namely:

"Excellent" - 94 points, "good" - 79 points, "satisfactory" - 59 points.

2. General provisions

2.1. Each academic discipline or other component of the individual curriculum that the student learns during the semester is completed with a semester control (SC), the form of which is provided by the curriculum, and is assessed accordingly with a semester grade.

2.2. Academic disciplines the study of which is completed by the final exams are assessed by semester final grade calculated as the sum of points divided according to the working program of the discipline into current control (CC) and examination control (EC) points. The teacher informs the students about the ways the point are calculated at the first lesson of this discipline.

2.3. Academic disciplines the study of which is completed by the final differentiated test are assessed by semester final grade that is total the amount of current control results points for all types of mandatory work provided by the working program of the discipline and the final control test.

2.4. The procedure for giving credits received by students participating in academic mobility programs is regulated by the Procedure for re-enrollment (enrollment) of academic disciplines or other components of the curriculum at the Lviv Polytechnic National University.

2.5. The procedure for certification of higher education applicants is carried out in accordance with the Regulations on certification of higher education applicants and the decision of examination commissions.

3. Forming ratings of students based on their learning outcomes

3.1. Student rankings are formed at the end of each semester by the Dean's office of the Institute for each course and each specialty.

3.2. Student rating (RS) reflects his/her ranking position among students of a certain course of a certain specialty, which is determined after the end of each semester on the basis of appropriate ratings of this student.

3.3. The formation of student ratings is carried out applying the following types of rating assessments of student's achievement:

- student's semester rating (PCO_j);
- student's rating (RO);
- competitive student's rating (KRO);
- competitive assessment of the student (CO).

3.4. Semester rating assessment of a student is an individual indicator of student learning outcomes (integrated numerical assessment of his/her knowledge and skills for a particular (j) semester).

The semester rating is calculated based on the semester grades of all components of the curriculum, taking into account the weight of each of them by the formula:

$$PCO_j = \frac{1}{K_j} \sum_{i=1}^m k_i \cdot CO_i, \quad (1)$$

where m is the number of components in the j-th semester; k_i - the number of credits from the i-th component in the j-th semester; CO_i is a semester grade from the i-th component on a 100-point scale in the j-th semester.

$K_j = \sum_{i=1}^m k_i$ – the number of credits for j-th semester from m components

of student's individual study plan

3.5. Student's rating is an integrated numerical assessment of student's achievement, which is determined by semester ratings (PCO_j) and the results of control of his/her residual knowledge in certain disciplines.

The student's rating for N semesters is calculated by the formula:

$$PO = \frac{1}{N} \sum_{j=1}^N PCO_j + \frac{1}{2K_i} \sum_{i=1}^n k_i \cdot 33_i, \quad (2)$$

where N is the number of semesters; n - the number of disciplines students' residual knowledge of which is tested; K - the total number of credits in accordance with the curriculum of professional training in a certain educational level; $33i$ – the student's grade based on the results of his/her residual knowledge assessment in i-th academic discipline in a 100-point scale (taking into account the positive grades only); k_i - the number of credits of the i-th academic discipline.

In case a student fails to be present at the event of students' residual knowledge control for valid documented reasons, the student with the permission of the dean's office has the right to pass it at another time determined by the relevant department. In all other cases, the $33i$ is assumed to be zero.

Competitive rating is the final rating of a person who graduated from the University in a particular educational program, calculated as the sum of the student's rating and his/her certifications grades that have the appropriate coefficients according to the formula:

$$KPO = k_0 \cdot PO + k \cdot AO = k_0 \cdot \sum_{i=1}^s PO_i + k \cdot \sum_{i=1}^s k_i \cdot AO_i, \quad (3)$$

$\sum_{i=1}^s k_i = 1.$

where AO – certificate attestation assessment of the student based on the results of s attestations; $k_0 = 0.75$, $k = 0.25$ - weighting factors of student's rating (RO) and student's rating based on the results of certifications (AO); AO_i - student's assessment based on the results of i-th certification; k_i - weighting factor of the results of the i-th certification, $\sum k_i = 1$.

3.7. Competitive assessment is an assessment consisting of the sum of the competitive rating assessment (KRO) of a person on a 100-point scale and the number of additional points (DB) for scientific and educational achievements:

$$KO = KRO + DB, \quad (4)$$

where DB is determined in accordance with the Appendix 2. The maximum number of additional points that are taken into account in the competitive evaluation cannot exceed 5 points.

4. Special conditions

Cases not provided for in these Regulations, special circumstances and situations on the basis of the student's application and a reasoned request of the director are considered and decided by the Rector or the relevant Vice-Rector appointed by him. The Rector's decision is final.

Criteria for assessing students' knowledge and skills

1. Criteria for assessing the student's knowledge and skills based on the results of studying the educational material of the component on a 100-point scale:

100-88 points - ("excellent") is awarded for a high level of knowledge (some inaccuracies are allowed) of the educational material of the component included in the main and additional recommended literature, the ability to analyze the phenomena being studied, their relationship and development, to answer questions clearly, concisely, logically, consistently, the ability to apply theoretical principles in solving practical problems;

87-80 points - ("very good") is given for knowledge of the educational material of the component above the average level, including calculations, reasoned answers to questions (a small number of inaccuracies), the ability to apply theoretical principles in solving practical problems;

79-71 points - ("good") is given for general correct understanding of the educational material of the component, including calculations, reasoned answers to questions, which, however, contain certain (insignificant) shortcomings, for the ability to apply theoretical principles in solving practical tasks;

70 -61 points - ("mediocre") is given for mediocre knowledge of the educational material of the component, poorly reasoned answers, poor application of theoretical principles in solving practical problems;

60-50 points - ("satisfactory") is given for poor knowledge of the educational material of the component, inaccurate or poorly reasoned answers, with a violation of the sequence of presentation, for poor application of theoretical principles in solving practical problems;

49–26 points - ("unsatisfactory" with the possibility of re-taking the semester control) is presented for failure in mastering a significant part of the educational material of the component, significant errors in answering questions, inability to apply theoretical principles in solving practical problems;

25–00 points - ("unsatisfactory" with obligatory repeating of the course) is given for complete failure in mastering a significant part of the educational material of the component, significant errors in answering questions, inability to solve practical problems, ignorance of basic fundamental principles.

2. The quality of the course project (work) is assessed by the following criteria:

- compliance of the content of the course project (work) with the task and requirements of educational and methodological recommendations for its implementation;
- independence in solving the task, design solution, execution of calculations, drawings, graphs and tables;
- the presence of elements of research procedure; application of computer technology;
- formulation of explanatory notes, graphic materials in accordance with the requirements for design and technological documentation.

3. The quality of the final qualifying work is assessed by the following criteria:

- the presence of justification for the relevance of the topic, its compliance with the current level of development of science and technology, and industry;
- independence of the defined task solutions, its design, performance of calculations, drawings, schedules, the relevance for economic analysis;
- the realizability of the diploma project (work), the possibility of its results implementation in production;
- the presence of elements of research nature;
- application of computer-aided design systems, application packages, specialized software,

etc.;

- formulating of explanatory notes, graphic materials in accordance with the requirements for design and technological documentation.
- compliance of the suggested solutions with modern norms and requirements for labor protection.

Additional points for scientific and educational achievements

1. Scientific articles:

in scientific periodicals that are included in scientometric databases SCOPUS or Web of Science	5 points
in scientific non-periodical publications included in the list of professional publications of Ukraine and international scientific periodicals not included in scientometric databases SCOPUS	
Web of Science	2.5 points
other publications.....	1.5 points

2. Abstracts of reports at scientific conferences:

International.	5 points
Ukrainian.....	1.0 points
University and other institutions of higher education.	0.5 points

3. Prizes in the second round of the All-Ukrainian competition of student research papers:

First place	5.0 points
Second place	4.0 points
Third place	3.0 points

4. Prizes in the second round of the All-Ukrainian Student Olympiad in academic disciplines or specialties:

First place	5.0 points
Second place.....	4.0 points
Third place.....	3.0 points

5. Obtaining a patent (positive decision to grant a patent) on:

invention (utility model).....	1.0 points
Awards for winning creative competitions (for architectural and art specialties):	
international	2.0 points
Ukrainian.....	1.0 points
regional... ..	0.5 points

Note. The maximum number of additional points for scientific and educational achievements that are taken into account in the competitive assessment cannot exceed 5 points.

If the article or thesis is co-authored, the number of points is divided by the number of co-authors.