

"APPROVE"
Rector of the Turkmen State Architecture and Construction Institute
B. Mammedov
" _____ " _____ **2025.**

Regulations for the Innovative Educational Competition "STEM Olympiad" among students of secondary vocational and higher educational institutions, as well as the corresponding STEM exhibition.

The President of Turkmenistan prioritizes the development of a generation of young specialists who are proficient in advanced technologies and possess strong scientific potential, with the aim of modernizing the country's educational system. To address these tasks, it is necessary to implement the Concept for the Development of the Digital Educational System in Turkmenistan, introduce innovations in the educational sphere, and, based on the roadmap approved by the order of the Ministry of Education of Turkmenistan dated December 27, 2024, under number 411 for the year 2025, ensure interdisciplinary connections. With the aim of identifying gifted youth who meet the requirements of the time and possess the necessary skills, this Regulation for the Innovative Educational Competition “STEM Olympiad” and the accompanying STEM exhibition among students of higher and secondary vocational educational institutions in our country has been developed and prepared.

This Regulation is a normative document that regulates the organization and conduct of the Innovative Educational Competition “STEM Olympiad” and the accompanying STEM exhibition.

1. General Rules

As part of the support for the Turkmen State Architecture and Construction Institute, an innovative educational competition titled "STEM Olympiad" and the accompanying STEM exhibition will be held on June 4, 2025. Applications for participation in the competition will be accepted from students of secondary vocational and higher educational

institutions of the country until May 25, 2025. The list of teams must be sent to the email address tdbgistem2025@gmail.com by May 25, 2025, in accordance with Appendix 1 to this Regulation. Each higher or secondary vocational educational institution has the right to present one team using any of the STEM, STEAM, or STREAM methods. Students studying at higher and secondary vocational educational institutions of the country may participate in the innovative educational competition "STEM Olympiad" and the accompanying STEM exhibition. The innovative educational competition "STEM Olympiad" and the accompanying STEM exhibition are conducted in a team competition format. Each team must consist of 4-6 (four to six) students. The team has the right to select one of its members as the captain. Captains of the teams participating in the competition have the right to make organizational decisions on behalf of their team and to represent the team's interests during the competition. The innovative educational competition "STEM Olympiad" and the accompanying STEM exhibition will be held at the Turkmen State Architecture and Construction Institute within the established deadlines.

2. Organizational and Methodological Support for the Conduct of the innovative educational competition "STEM Olympiad" and the Accompanying STEM Exhibition

To implement overall guidance for the organization and conduct of the innovative educational competition "STEM Olympiad" and the accompanying STEM exhibition, an organizational working group is established. The composition of the organizational working group is approved by the order of the rector of the Turkmen State Architecture and Construction Institute.

The organizational group: • Defines the main directions for conducting the innovative educational competition "STEM Olympiad" and the accompanying STEM exhibition and carries out organizational activities for the competition; • Reviews appeals from competition participants and conducts explanatory work regarding complaints and suggestions.

3. The main goals of the innovative educational competition "STEM Olympiad" and the accompanying STEM exhibition:

- Improving the quality of professional training for students;
- Identifying highly successful students capable of developing scientific creativity and production;
- Fostering a love for their future profession (specialty);

- Developing long-term projects that require students to integrate knowledge from various fields;
- Designing software for various purposes and directions;
- Improving academic performance;
- Implementing the connection between theory and practice based on a project approach;
- Developing future competencies;
- Fostering creative thinking, analytical skills, and teamwork;
- Utilizing theoretical knowledge to solve real-world problems using an interdisciplinary approach.

4. Conditions for conducting the innovative educational competition "STEM Olympiad" and the accompanying STEM exhibition

The innovative educational competition "STEM Olympiad" involves the development of software solutions covering integrated areas related to STEM (science, technology, engineering, and mathematics). Participants in the competition may use the provided programming languages, exact and humanitarian sciences, various technologies, engineering fields, mathematics, as well as creative and robotic elements within a unified system. The time allocated for the competition is 6 hours, during which each team must present a multifaceted general task based on their approach. Each project is evaluated based on 3 main criteria (accuracy and correctness of the theory related to natural sciences, project appearance, usability of the project) and 2 additional criteria (ecological usefulness, economic efficiency). Each of the main criteria is worth 30 points, and each of the additional criteria is worth 5 points. The innovative educational competition "STEM Olympiad" and the accompanying STEM exhibition will take place on June 4, 2025, and the projects must be prepared by June 3 at the exhibition venue. A special area will be allocated for participants from secondary vocational and higher educational institutions, provided by the Turkmen State Architecture and Construction Institute. Each participant is allowed to decorate their allocated space at the exhibition with projects in the areas of STEM, STEAM, and STREAM. Students from higher and secondary vocational educational institutions who wish to participate in the STEM exhibition can join. Each project presented at the exhibition must have an explanatory note and an additional observer who will confirm the project's compliance with the stated STEM directions.

5. Conditions for the Use of Permitted and Prohibited Devices in the innovative educational competition "STEM Olympiad" and Corresponding STEM Exhibition Participants of the innovative educational competition "STEM Olympiad" are allowed to use:

- Personal computers and laptops;
- Keyboards in any language;
- Language files for keyboards;
- Mice;
- Devices related to the field of robotics. The use of mobile phones and artificial intelligence-based software during the Olympiad is prohibited.

6. Requirements for Participants of the innovative educational competition "STEM Olympiad"

- Participants must be able to run Google Forms from their personal computer/laptop in any browser;
- The computer/laptop must have programs installed for solving programming tasks;
- There must be a responsible teacher from the educational institution in the team;
- Participants must know and understand the basic concepts in the fields of modeling, programming, engineering, and robotics;
- Participants must be able to apply skills in modeling, programming, engineering, and robotics;
- During the Olympiad, participants must fully and correctly comply with the requirements of the regulations.

7. Procedure for Determining Winners and Awards at the "STEM Olympiad" and corresponding STEM exhibition

Exhibition A jury is established to determine the winners of the "STEM Olympiad." The composition of the jury is approved by the order of the rector of the Turkmen State Architecture and Construction Institute. Winners of the competition are determined by summing the scores assigned by the jury members. According to the results of the competition, teams recognized as the best by the jury members will be considered the winners of the "STEM Olympiad." The jury members of the "STEM Olympiad" monitor the students' work methods, the technological literacy of each project, the timeliness and accuracy of execution, as well as compliance with safety and labor protection requirements. Based on the results of the competition, the winners in the team event are awarded 1 main prize, 1 first place, 1 second place, and 1 third place. Winners of the competition are awarded diplomas of I, II, and III degrees from the Turkmen State Architecture and Construction Institute and commemorative gifts from the institute's trade union organization. The results of the "STEM Olympiad" are formalized in the

form of protocols and approved by the order of the rector of the Turkmen State Architecture and Construction Institute. For contact: tel.: +99362665547; +99365101018.

Appendix 1

An innovative educational competition titled "STEM Olympiad" and the corresponding STEM exhibition will be held among students of secondary specialized and higher educational institutions of our country.

_____ students participating in it, the name of the secondary vocational or higher educational institution, and information about the group leader.

	Information about students			Information about the supervising teacher	
	Last name, first name and patronymic.	Field of study and year of study	E-mail address	Last name, first name and patronymic	For contact
1					
2					
3					
4					
5					
6					
7					