

General regulations for the Statistics Olympics organized by the Spanish National Statistical Institute (INE), the Spanish Society of Statistics and Operations Research (SEIO) and the Faculty of Statistical Studies of the Complutense University of Madrid (FEE)

1. Objectives

The general objectives of the Statistics Olympics are:

- To promote curiosity and interest in statistics among students.
- To encourage teachers to use new materials for teaching statistics by promoting the use of real data and search for applications of acquired statistical knowledge.
- To show the role of statistics to students and teachers in various aspects of society, making it known as a university study.
- To promote teamwork and collaboration to achieve common goals.

2. Participation

Students of the compulsory secondary education (usually 14-16 years old), the basic vocational training, and the baccalaureate (usually 16-18 years old) can participate in teams of 1 to 3 students. Each team should have a teacher/tutor from their center who will supervise their work.

There is no limitation on number of participants from the same center nor on works supervised by the same teacher.

Students are not allowed to participate in more than one team.

The participation of each team will take place in one of two categories:

- Category A: the baccalaureate and medium-level basic vocational training cycles.
- Category B: the compulsory secondary education.

3. Registration

Each student wishing to participate in the Statistics Olympics must be registered online at www.ine.es/olimpiada. The registration will be made by the teacher of the team and must include the information requested on all participants. There will be a code assigned to each registered team that should be used as an identifier in subsequent communications with those responsible for the organization of the Statistics Olympics. The participants can send their questions by email to olimpiada.estad@ucm.es.

4. Tests

Participants of the Statistics Olympics will take an elimination test in two phases. Only those who pass both phases will be among the finalists of the Olympics.

The first phase test will be done through a web form and will consist of closed questions. The second phase test will consist of a presentation made in the pdf format and needs to be sent by e-mail to olimpiada.estad@ucm.es in a period set by the organizers of the Statistics Olympics.

It will not be necessary to travel anywhere to take tests of any of the two phases.

First phase:

Each team needs to answer questions from the three tests described below:

a. The basic knowledge test

The goal is to answer 10 questions on understanding of statistical measures,

A collection of questions with different level of difficulty will be prepared for the compulsory secondary education category and for the baccalaureate and the basic vocational training category.

b. The use of official statistical data sources test

The goal is to answer 10 questions on various statistical data. This will require navigation through the INE's website as well as websites of other official statistical organizations.

c. The interpretation of statistical reports test

The goal is to answer 10 questions on the results of the winning works in the VI National Phase of the Contest Type "Incubator of Surveys and Experiments" published on the SEIO's website <http://www.seio.es>.

Second phase:

Test on statistical research

This test is about performing an analysis and exploitation of a dataset in Excel and will be facilitated by the organizers of the Olympics. The dataset will be comprehensive and will allow exploration of different facets of information at the choice of participants. The work will be limited to a specific dataset; no work will be accepted if analysis and exploitation of a different databases are carried out nor those in which there have been addition of complementary information. There are no restrictions on the software used for the exploitation of the database.

The jury will only evaluate the printable works. Elements like links to external contents, embedded videos etc. will not be considered as a part of the work and therefore will not count for the evaluation.

The results of the work will be presented in a PowerPoint presentation or in a similar format and should be printed as a pdf that includes the following sections:

- Objectives of work.
- Method of work: tools used, techniques of information analysis, etc.
- Results: tables, graphs, results of analysis, etc.
- Conclusions.

An initial slide will be included in the presentation indicating information on the team and school, the names of the teacher/tutor and the participants and the category in which they participate. The presentation in pdf format with the results of the second phase will have a total number of 8 slides maximum (including the initial slide with information on the team). Such pdf file will be sent by email to oliestad@ucm.es within the deadline set, indicating in the subject line of the message: "Category [...] - * Name of the team *".

5. Evaluation Criteria

First phase

Each of the three tests of the first phase will be evaluated in terms of success and failure, taking into account that a correct answer carries a point, an incorrect answer subtracts a half of a point and a question without answer carries no points. The maximum grade for each of the three tests will be 10 points.

The result of the first phase will be obtained by calculating the arithmetic mean, rounded to one decimal place, of the scores obtained in each of the three tests, and multiplying the result by 10, so that the final score for this phase will be of 100 points maximum. The ranking of all participating teams will be determined in this way. At least a half of the teams will be eliminated after the first phase.

The points obtained in the first phase will be used to qualify teams for the second phase. In addition, the score in this phase will be included in the calculation of the final grade with a weight of 25%.

Second phase

For the evaluation of the works of the second phase, the following aspects will be taken into account:

- Presentation format (order, clarity of explanation of each section, visual aspects).
- Adequacy of the proposed analysis to the objectives.
- Methodology and analysis carried out that must be in alignment with the educational levels of participants.
- Presentation of the results (balance of tables, graphs, texts, etc.).
- Explanation of findings.

The jury will select five best works in each category and evaluate them with up to 100 points. The score in this phase will be included in the calculation of the final grade with a weight of 75%.

Final Score

The final score for the five works selected for each category will be obtained as the weighted average, with a maximum of three decimal places, of the scores obtained in the first and second phases, by the following formula:

Final score = 0.25 * Phase 1 score + 0.75 * Phase 2 score.

The winning team is the one that obtains the highest final score in each category. The other four teams from each category will be considered finalists of their respective categories.

6. Awards

The winning teams, one from the Category A and one from the Category B, will receive the following prizes:

- For a teacher of the winning team:

A tablet, a gift voucher of 300 euros and some statistical publications and promotional material.

- For each student of the winning team:

A tablet and some statistical publications and promotional material.

In addition, the jury may grant a mention to any team. All teams that pass the first phase will receive a diploma.

7. Jury

In the first phase, the jury consisting of 6 persons, two from each organizing institutions, will evaluate tests anonymously.

In the second phase, the jury will preselect five best works for each category. Next, two winning works will be determined by taking into account the final score obtained by each team.

The jury's decision is final.

The jury may decide to leave prizes vacant.

8. Communication of the jury's decision and awards ceremony

The decision of the jury will be announced to the teachers/tutors of the winning teams by e-mail and will be published at www.ine.es/olimpiada, <http://estudiosestadisticos.ucm.es/> and <http://www.seio.es> on the date indicated by the organizers. At the same time, the date and place of the award ceremony will be announced.

9. Calendar

Registration period: from October 3, 2016 to January 27, 2017.

Testing period for the first phase: from January 30 to February 13, 2017.

Publication and communication of the results of the first phase: February 15, 2017.

Submission of work of the second phase: from February 16 to March 9, 2017, both inclusive.

Announcement of winning teams: March 30, 2017.

10. Publication of works

The awarded works or those that received mentions would be announced on the websites of the three organizing institutions, indicating the names and photos of their authors. The participants will accept the terms and conditions and allow the publication of their works. They may at any time revoke their consent to the processing of their personal data derived from their participation in this call, without prejudice to any other right that assists them, in accordance with Organic Law 15/1999 of December 13, Protection of personal data and in its development regulations. All the materials presented at the Olympics will be retained by the INE.

11. Reservation of rights

The INE, FEE and SEIO reserve the right to change the terms and conditions of the Statistics Olympics, especially the dates announced in the calendar, or even its possible cancelation, whenever there is justified cause. These modifications would be made public at www.ine.es/olimpiada, <http://estudiosestadisticos.ucm.es/> and <http://www.seio.es>.

12. Acceptance of the rules of the Statistics Olympics

Participation in the Statistics Olympics assumes the acceptance of all terms and conditions.