

# General rules for the National phase of the European Statistics Competition 2024 (ESC), organized by the Statistical Service of Cyprus, the Ministry of Education, Sport and Youth, the University of Cyprus and the Cyprus Statistical Society

## 1. Objectives

The general objectives of the European Statistics Competition 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

Participation in the national phase of the competition is open to all secondary-age students who are studying at any officially recognized educational institution of Cyprus. Students will participate in teams of 2 to 3 persons. All students of a team should belong to the same school and category. Each team should have a teacher from their institution acting as the tutor, who will be responsible of supervising their work and generally performing a coordinating role and communicating with the organizers.

There can be a maximum of 4 (four) teams from the same institution. In cases of sixth-grade or seventh-grade schools, up to 6 (six) teams can participate, with a maximum of 3 (three) teams per category as defined below. There is no limitation on the number of teams supervised by the same tutor. 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:** Upper Secondary [Students of A', B', C' Lyceum\* aged up to 18 years on 31/12/2023]

**Category B:** Lower Secondary [Students of A', B', C' Gymnasium aged up to 16 years on 31/12/2023]

The national phase of the competition will be conducted in the Greek and English language.

\* Students attending the seventh grade of an educational institution are allowed to participate in the Upper Secondary Category provided that they comply with the age restriction.

## 3. Registration

Tutors of teams wishing to participate in the competition must register their teams online at <http://esc2024-cyprus.cystat.gov.cy>. The registration must include all the information requested in the form. Tutors may contact the organizers for any clarifications by email at [esc-cy@cystat.mof.gov.cy](mailto:esc-cy@cystat.mof.gov.cy).

## 4. Assignments

The national phase of the competition includes 2 (two) assignments. All teams will take part in the first qualifying assignment. Based on the teams' scores, the first 10 (ten) in each category will proceed to the second assignment. The winning team in each category will be determined by the score of the **second assignment**.

The first assignment will be carried out through a web platform and will consist of **3 (three) parts** with closed questions. Each question will have 4 (four) possible answers of which only 1 (one) will be correct.

The second assignment will consist of the preparation of a statistical data analysis presentation (slides) and needs to be prepared and submitted in the manner specified below. The teams will then be invited to present their work orally before a jury, in Greek or English. The presentation should be made in the language in which it was written.

### **First assignment:**

#### **Part A. Basic knowledge test**

The goal is to answer 10 (ten) questions on understanding of basic statistical concepts, interpretation of graphs, basic probability etc. The questions will be different for each category.

#### **Part B. Use of official statistical data sources test**

The goal is to answer 10 (ten) questions on various statistical data. This will require navigation through the web portal of the Statistical Service of Cyprus. The questions will be the same for each category.

#### **Part C. Interpretation of statistical reports test**

The goal is to answer 10 (ten) questions regarding the publication of the Statistical Service of Cyprus "Gender Statistics". The publication will be available in Greek and English. The questions will be the same for each category.

### **Second assignment:**

#### **Presentation of a statistical analysis**

In this assignment the teams will have to prepare a statistical data analysis presentation as a result of the exploitation of statistical data which will be defined by the organizers. The dataset will allow exploration of different facets of information at the choice of the participants.

The results of the analysis will have to be presented in a PowerPoint presentation or in a similar format and must be saved and sent as a pdf file that includes the following sections:

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

An initial slide must be included in the presentation indicating the names of the team and its members, the name of the school, district, and the category in which the team participates. The presentation in pdf format should not exceed 8 (eight) slides (including the initial slide with information on the team). The pdf file must be named with the exact name of the team and uploaded on the platform within the deadline set (see §9. Calendar).

The jury will only evaluate the printable parts of the pdf file. Elements like links to external contents, embedded videos etc. will not be considered as part of the assignment and therefore will not count in the evaluation.

The analysis must be limited only to the statistics specified. No assignments will be accepted where analysis and exploitation of different databases is carried out, nor those in which there has been an addition of complementary information. There are no restrictions on the software used for the processing of the data, however, the team should be able to explain the statistical analysis methodology they have used.

All the members of the teams that will have submitted a second assignment, will be invited to present, before the jury, the methodology, analysis and results of their study, based on the presentation they have prepared. The total duration of the presentation should not exceed 10 minutes. After the presentation, the jury members will be able to ask questions. The evaluation of the presentation before the jury, will concern the team as a whole. The tutor of the team may be present as an observer. Failure of any group to present their assignment orally, will result in their disqualification.

In order to support the teams that will proceed to the second assignment, an educational seminar will be offered covering relevant statistical science topics. The date and arrangements of the seminar will be sent to the teams when finalized.

## 5. Evaluation Criteria

### **First assignment**

Each of the three parts of the first assignment will be evaluated taking into account that a correct answer carries one (1) point, an incorrect answer subtracts 0,33 points and a question without answer carries no points. The maximum grade for each of the three tests will be 10 (ten) points.

The result of the first assignment 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 assignment will be at most 100 points. In this way, the ranking of all participating teams will be determined.

The evaluation of the three parts and the calculation of the score for the first assignment will be automatically carried out by the platform software.

The first 10 (ten) teams of each category will qualify for the second assignment.

All the teams participating in the first assignment will receive a participation diploma. The teams that will qualify to the second assignment will additionally receive, a distinction diploma.

### **Second assignment**

The following aspects will be taken into account when evaluating the second assignment:

- Output presentation (15%)
  - The presentation is well-structured into different parts
  - The presentation is clear, can be easily read and attracts interest
- Objectives (10%)
  - The presentation has well-defined primary and secondary objectives
  - The interest in studying the proposed objectives is justified with relevant arguments
- Information analysis (35%)
  - Analysed data are appropriate to study the selected objectives
  - Tables and graphs have comments so that the most relevant information is highlighted
  - Graphs are appropriate and support the conclusions
  - There is good balance between tables, graphs and central tendency indicators used
  - Reasons of using each statistical indicator are explained
  - There are references to sources/bibliography
  - The methodology followed and processing of the data must be at an appropriate level taking into account the educational level of the team

- Conclusions (10%)
  - There is one conclusion per objective and a general conclusion as well
  - There are warnings about the limitation of the conclusions of the analysis (should such limitations exist)
- Presentation before the jury (30%)
  - Clarity and clear explanation of the assignment
  - Creativity and a presentation style that captures interest
  - Coordination between team members
  - Compliance with the time limit

The jury will evaluate the assignment of each team based on the above criteria, with a maximum score of 100 points.

### **Final ranking**

The final ranking of the teams based on the score of the second assignment, will determine the winning team in each category, as well as the teams with the right to participate in the European phase of the competition (see §11)

## **6. Awards**

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

- For each student of the winning team: The amount of €200.
- For the tutor: A tablet.

The teams in the second place of the national phase, one from Category A and one from Category B will receive the following prizes:

- For each student of the team: The amount of €50.
- For the tutor: A graphic tablet.

In addition, the jury may grant an honorary mention to any team.

In case of having two winning teams with the same tutor, the tutor will only receive one prize.

## **7. Jury**

The jury for the national phase will consist of 5 (five) members, 2 (two) from the Statistical Service of Cyprus, 1 (one) from the Administration of Secondary Education of the Ministry of Education, Sport and Youth, 1 (one) from the University of Cyprus and 1 (one) from the Cyprus Statistical Society.

The jury's decision is final.

The jury may decide not to award any prize.

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

The decision of the jury will be communicated to the 10 (ten) teams of each category that participated in the second assignment, by e-mail and it will be published on the national competition website and the websites of the organizers, on the date indicated by the organizers. The organizers will inform the teams for the date and arrangements of the award ceremony, in due time.

## 9. Calendar

### **Registration period:**

20 October – 30 November 2023.

### **First assignment tests:**

16 January 2024.

### **Publication and communication of the results of the first assignment:**

22 January 2024.

### **Submission of the second assignment:**

29 January – 11 March 2024.

### **Presentation before the jury:**

Gymnasium teams: 19 March 2024, Lyceum teams: 26 March 2024

### **Announcement of winning teams:**

29 March, 2024.

**Award ceremony:** Date and arrangements are still to be determined.

It is recommended that the teams start their preparation as soon as they register to the competition.

## 10. Publication of outputs

The awarded outputs in the second assignment or those who received honorary mentions could be announced on the national competition website and the websites of the organizers, indicating the names of the teams and its members, the school they come from and their category.

With their registration, participants accept these rules and allow the publication of their work, as well as the publication of photos or videos where students will be presented. All the material presented at the national phase of the competition will be retained by the Statistical Service of Cyprus.

## 11. European phase of the European Statistics Competition 2023

For participation in the European phase of the competition, the jury will use the list with the final scores achieved by category, in the second assignment of the national phase (see §5, Final ranking).

The winning team and finalist team with the highest scores of each category will be eligible to participate in the European phase of the competition. The maximum number is 2 (two) teams per category. The organizers of the national phase will contact the teams in due time to inform them about the European phase.

In the event that the proposed teams cannot attend or refuse to participate in the European phase, the organizers of the national phase will contact the next runner-up team of the aforementioned list.

The European phase of the competition will be conducted in English.

## **12. Reservation of rights**

The organizers reserve the right to change the terms and conditions of the national phase of the competition, especially the dates that are announced in the calendar, or even cancel the competition, whenever there is justified cause. Any amendments will be published on the national competition website or/and the websites of the organizers.

## **13. Acceptance of the rules of the national phase of the European Statistics Competition**

Participation in the national phase of the European Statistics Competition (ESC) assumes the acceptance of all these rules.

Any issue that does not fall under these rules will be finally resolved by the organizing committee.

### **\* Translation clause**

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**\* This document has been drafted in the Greek language and translated to the English language for informative purposes. In the event of any translation conflicts or content discrepancy, the Greek version shall prevail.**