

**European Statistics Competition 2023-2024 (ESC)**, organized by **STATEC** (Institute for statistics and economic studies in Luxembourg) in collaboration with **SCRIPT** (Minsitry of Education, Children and Youth)

## 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 European Statistics Competition is open to all secondary-age students who are studying at any officially recognized educational centre of Luxembourg. Students will participate in teams of 1 to 3 pupils. All students of the team should belong to the same school and category. Each team should have a teacher from their centre acting as the tutor of the team, who will supervise their work.

There is no limitation on the number of participants / teams from the same centre nor on 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:** students in the last two courses of secondary education (approx. 16-18 years old)

**Category B:** rest of students of secondary education (approx. 14-16 years old)

## 3. Registration

Tutors of teams wishing to participate in the Statistics Competition must register the teams online at <https://www.esc2024.eu/>. → Registration (choose the country and complete the registration form).

The registration must include all the information requested in the form. Participants can send their questions by email to [esc@statec.etat.lu](mailto:esc@statec.etat.lu).

The national phase in Luxembourg consists of a web questionnaire (first assignment, see below) as well as a photo competition (second assignment, see

below). The two best-scoring teams in each age category, will be qualified to participate in the European phase of the competition (more information below).

However, it is possible to only participate in the photo competition. Registration should then be done by sending an email to the address [esc@statec.etat.lu](mailto:esc@statec.etat.lu). Teams that only participate in the photo competition can win certain prizes (see below), but will not be able to qualify to enter the European phase of the competition.

## 4. Assignments

Participants in the national phase of the ESC 2023-2024 will take two eliminatory assignments. Only those who pass **both** assignments will be among the finalists of the Competition.

The first assignment will be done through a web form and will consist of three tests with closed questions. Those questions will have 4 possible answers of which only one will be the correct option.

The second assignment will consist of a photo competition on the theme of the use of statistics in our daily lives.

### First assignment: Web questionnaire

#### a. Basic knowledge test

The goal is to answer 10 questions on understanding of basic statistical concepts, interpretation of graphs, basic probability etc.

A collection of questions with different level of difficulty will be prepared for each category.

#### b. Use of official statistical data sources test

The goal is to answer 10 questions on various statistical data. This will require navigation through the STATEC website and the Statistics Portal Luxembourg [www.statistiques.lu](http://www.statistiques.lu).

#### c. Interpretation of statistical reports test

The goal is to answer 10 questions about the Eurostat publication "[SDGs&me](#)". This publication will be available in English and therefore the language of the questions and answer options will also be in English.

## Second assignment: Photo competition

### Theme “Better lives through statistics”

As part of the competition, STATEC is organizing a photo contest where students are invited to combine the art of photography with statistical data to show how statistics can improve their daily lives.

#### Topic description:

How can statistics improve my life? How can statistics help me in my daily life?  
How can I use statistics to make better decisions?

This topic can be approached in two ways.

Option 1: Students choose a topic from their daily lives and create a poster or collage demonstrating the usefulness of statistics in this area.

*Example: Students want to improve their grades. They create datasets for areas that can help them achieve their goals (sleep, exercise, other) and show through pictures and data how data helped them.*

Option 2: They first select existing data and choose a subject from everyday life to create the poster or collage.

*Example: Students search for data on Luxembourg expenditures on food. They decide to see if it is possible to eat a healthy, balanced and tasty diet on a lower budget. They track data (food prices, gas prices if they decide to shop somewhere else, etc.) to show whether it is possible or not and present it in the collage through data and pictures.*

The poster/collage must be accompanied by a **title** and a **text of no more than 150 words**.

The poster/collage, with a minimum image resolution of 2481x3510 pixels, should be sent with the explanatory text to [esc@statec.etat.lu](mailto:esc@statec.etat.lu).

## 5. Evaluation Criteria

### First assignment

Each of the three tests of the first assignment will be evaluated in terms of success and failure, taking into account that a correct answer carries a 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 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 of 100 points maximum.

The ranking of all participating teams will be determined in this way.

The score in the first assignment will be included in the calculation of the final grade with a weight of 50%.

Those teams who pass the first assignment will receive a diploma.

## Second assignment

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

- Poster/collage (70%)
  - The pictures included are original, creative and of good quality
  - The data included is pertinent and well researched
  - The pictures and the data are related and create a story
  - The theme is respected
  - Efforts were put in the conception and creation of the assignment (pictures, data, as well as poster)
- Title and description (30%)
  - Title is catchy and represents the topic well
  - The description is no more than 150 words long, well written and pertinent to the collage
  - The description adds to the collage, but is not needed to understand it

## Final Score

The final score for the five assignments 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 assignments, by the following formula:

Final score =  $0.5 * 1\text{st assignment score} + 0.5 * 2\text{nd assignment score}$ .

The winning team is the one that obtains the highest final score in each category.

The other four teams per age category will be considered finalists of their respective categories.

Theoretically, **in each age category, there will therefore be 3 winning teams\***.

**The best 2 teams of each category are eligible to participate in the European phase.**

\*Subject to having 3 teams that have obtained a minimum of 60% of the points in both assignments for each age category.

## 6. Awards

The top three winning teams in the national phase, three from category A and three from category B, will receive numerous **high-tech prizes**.

A **special prize** will be awarded to the team that submitted the best poster/collage in the **photo competition**. This means that in theory a team can win two prizes: one prize for their final ranking in the national phase and one prize for the best photo. This prize will be a single prize regardless of the age category of the participants.

A **thank you prize** will be awarded to the **tutors** of the winning teams of the final ranking and the special prize winning team. However, a tutor can only win one prize, even if they have tutored multiple winning teams.

## 7. Jury

The national phase jury will include experts in communication, statistics and art.

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 announced to the winners and finalists by e-mail and it will be published on STATEC's website and social media platforms on the date indicated by the organizers. The organizers will settle the date and place for the award ceremony with each winning team.

## 9. Calendar

### National phase

**20<sup>th</sup> October 2023:** Opening of Registration

**20<sup>th</sup> October 2023:** Start of photo contest

**15<sup>th</sup> December 2023 (23:59 hours):** Closing of registrations

**18<sup>th</sup> December 2023:** Publication of web questionnaire

**16<sup>th</sup> February 2024 (23:59 hours):** Deadline for submitting national phase assignments 1 and 2

**11<sup>th</sup> March 2024:** Announcement of national phase winners.

➔ **Registration period:** from 20/10/2023 to 15/12/2023

➔ **Period for the first assignment:** from 18/12/2023 to 16/02/2024

→ **Period for the second assignment:** from 20/10/2023 to 16/02/2024

End of the national phase. Maximum 4 teams per country are sent to the European final.

### **European phase**

**15<sup>th</sup> December 2023:** Publication of the topic for the assignment of the European phase

**13<sup>th</sup> May 2024:** Deadline assignment European phase

**6<sup>th</sup> June 2024:** Public announcement of the winners

**Between 26<sup>th</sup> and 28<sup>th</sup> June 2024:** award ceremony

## **10. European phase of the European Statistics Competition 2023-2024**

The winning teams and the finalists with the highest grade of each category will be eligible to participate in the European phase of the European Statistics Competition. The organization of the national phase will contact the teams in due time to inform them about the European phase.

For this purpose the jury will prepare a list with at most five teams per category sorted by the highest grade obtained in the national phase. The first team in the list will be the winner, followed by the four finalists. In case the proposed teams could not attend or refused to participate in the European phase, the jury will contact the following team of the aforementioned list.

## **11. Reservation of rights**

STATEC and its partners reserve the right to change the terms and conditions of the national phase of the ESC, especially the dates announced in the calendar, or even its possible cancellation, whenever there is justified cause. These modifications would be made public at <https://statistiques.public.lu/en/statistique-publique/statec/european-statistics-competition.html>

## **12. Acceptance of the rules of the national phase of the ESC**

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