

# Course of events of the Lëtzebuerger Informatiksolympiad (LIO) 2025

The Lëtzebuerger Informatiksolympiad (LIO) 2025 competition is held in 4 rounds:

## Round I – qualification



The participants must solve (program) the tasks stated in the task descriptions (in English language) of the qualification round at home. The task descriptions consist of four tasks of varying degrees of difficulty. In total, the four tasks are scored out of 100 points. To participate in the competition, at least one task must be solved.

The programming languages accepted for the qualification are the current versions of C/C++ and Java as well as Python 3. C/C++ is preferred, due to runtime effectiveness.

**To participate in the competition, you must:**

- register by means of the online registration form;
- submit the solutions (source programs) of the tasks to the automated judge CMS (Contest Management System) - login details (username + password) are communicated by email to the participants shortly after their online registration. The correct file extensions for the source programs are \*.CPP, \*.PY or \*.java.

**The deadline for submitting the online registration form is February 23, 2025 (23:59), at the latest.**

The registration form and the task descriptions of the qualification round are available on the website

**[www.infosolympiad.lu](http://www.infosolympiad.lu)**

Important: Since the programs are evaluated in real time in an automated way by means of the Contest Management System (CMS), submitted programs that do not comply with the layouts and formats requested in the tasks description will not be considered! It is imperative to program console applications only - please refer to the remarks for C/C++, Python and Java on the website to write and test your programs.

The algorithm chosen for the solution of the problems is not evaluated and solutions can be submitted to the CMS as many times as desired.

The participants with the highest scores in the qualification round are admitted to the semi-finals.

## Round II - semi-finals



The semi-finals consist of a practical test where participants must individually solve three tasks of varying degrees of difficulty within a given time. The participants have four hours to design the solutions to the algorithmic problems and to implement the corresponding programs. In total, the three tasks are scored out of 100 points. The programs are evaluated in real time in an automated way using the Contest Management System (CMS).

The semi-finals will take place on Thursday, March 11, 2025, from 2:00 p.m. to 6:00 p.m. in a computer room of the Athénée de Luxembourg.

Programming languages admitted for the semi-finals: current versions of C/C++, Java and Python 3.

The semi-finals will select at most 15 participants who will be admitted to the third round of the competition.

### Round III - programming and algorithmic training



The programming and algorithmic training allows the selected participants to deepen their knowledge of programming, to acquire algorithmic methods and to learn - if necessary - the C++ programming language required in the finals. It is direct preparation for the finals. The training, which can be organized in several face-to-face sessions in a computer room of a high school or carried out online, takes place during the months of March, April and May 2025.

In principle, all participants who have taken part in the training are admitted to the finals.



### Round IV - finals



The finals consist of a practical test where participants must individually solve two tasks of varying degrees of difficulty within a given time. The participants have four hours to design the solutions to the algorithmic problems and to implement the corresponding programs. The two problems are scored out of 100 points. The programs are evaluated in real time using the Contest Management System (CMS). The problems require the implementation of the algorithmic methods covered during the programming and algorithmic training of round III.

ATTENTION: Programming language admitted for the finals: only the current version of C/C++, official language of the international competitions.

The finals will take place on Thursday, May 13, 2025, from 2:00 p.m. to 6:00 p.m. in a computer room of the Athénée de Luxembourg.

### And the best...

- The 4 winners of the LIO 2025 are automatically selected to participate as contestants in the 37<sup>th</sup> International Olympiad in Informatics (IOI). This international contest will take place (dates to be determined) in La Paz (Bolivia).



- At most 4 of the best girls of the LIO 2025 will participate as a contestant in the 5<sup>th</sup> European Girls' Olympiad in Informatics (EGOI). This international contest will take place (dates to be determined) in (to be determined) (Germany).



- Up to 6 of the best finalists of the LIO 2025 will participate as contestants in the 3<sup>rd</sup> Western-European Olympiad in Informatics (WEOI). This international contest will take place from June 27<sup>th</sup> to June 29<sup>th</sup> in Volterra (Italy).



## And finally...

All finalists present at the finals as well as all participants in the international competitions (EGOI, IOI, WEOI) receive a certificate and a prize which are awarded at an award ceremony in mid September.