Online Physics Olympiad - 2025
Rules and Regulations

The OPhO is a team-based competition (3 members at most per team) held during the summer consisting of both: an open round held for 3 days; and, an invitational round held for 2 days.

Open Round. The open contest will be held from August 7, 12 am (UTC), to August 9, 11:59 pm (UTC). The test will consist of 35 problems. Teams will have to submit numerical answers on the OPhO portal https://opho.physoly.tech/ when emailed their team login (after registering). Answers can be given anytime within the given timeframe. The top 5-10% of the pool in the open round will be invited to participate in the invitational round.

Invitational Contest. The invitational round consists of both a theory and a potential experimental portion. Participants are given 2 full days to complete the theoretical portion, starting from August 23, 12 am (UTC). They are given 1 full day to complete the experimental portion starting at August 24, 12 am (UTC). Both portions end on August 24, 11:59 PM (UTC).

Registration. Registration closes on August 1, 12 am (UTC).

Eligibility. To be eligible for potential awards for the 2025 OPhO, the entire team must consist of members that: (1) must not have started university studies; and (2) are under the age of 20 during the contest. Undergraduate students are welcome to participate, but they will not be able to get any awards and will be put in a separate division.

Scoring. The base score for each problem is dependent on the number of teams that successfully answer it. Each incorrect attempt will multiply the base score by a factor of 0.8, and there is be no time factor. The scoring for an individual problem follows:

$$w(N) = (0.8)^i[e^{-\frac{x(N)}{200}} + e^{-\frac{x(N)^2}{100}} + 1],$$

where $i \in \{0, 1, 2\}$ (represents whether a team got it on the first try, second try, or third try), N represents the number of teams that answer the problem correctly, and $x(N)$ is the sum of $(0.8)^i$ across all teams that have solved the problem. Note that the base score is independent of problem number, but expect questions to be ordered roughly by difficulty. The cumulative score of a team's submission will be determined by the sum of these values.

Submitting Invitational Solutions. Rubrics for invitational problems are predetermined, and solutions will be reviewed to determine the proper number of points to give. Participants of the invitational round will be given a google form where they are allowed to submit up-to 1 gigabyte of data for their solutions. It is recommended that participants write their solutions in LaTeX. However, handwritten solutions (or a combination of both) are accepted too. If participants have more than one photo of a handwritten solution (`jpg`, `png`, etc), it is required to organize them in the correct order in a `pdf` before submitting.

Awards and Results. The top competitors in the invitational and open contests will be recognized on the website. The top 3 teams in the invitational round will be given cash prizes.

Dishonest Behavior. Please refrain from cheating in any form. This includes, but is not limited to, creating alternate accounts to gain additional attempts, sharing answers with other teams, posting problems online, utilizing AI models like ChatGPT, or employing any other method to gain an unfair advantage. *To aid in our AI detection methods, all teams must preserve their detailed working (in any form) in its entirety.* After the contest is over, upon request, you should be able to send us all of your working within twelve hours. Failure to do so will lead to automatic disqualification. You should be able to produce working for every question.

We have previously caught numerous teams engaging in such practices, and pursuing dishonest tactics provides no genuine sense of security. Any teams found to be acting maliciously will be notified via email, along with the opportunity to appeal. Failing to provide a valid appeal will result in a ban from participating in any future Physoly competitions. Our utmost priority is to ensure an enjoyable contest experience for all participants, and we remain committed to preventing any disruption to the fun for others.