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Republic of the Philippines  
**Department of Education**  
REGION IV-A CALABARZON



February 2, 2023

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this advisory is issued not for endorsement per DO 28, s. 2001,  
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**UP Physics Association (UPPA) Invitation to  
PISIKAAalaman 2023**

The **UP Physics Association (UPPA)** is an established non-profit, academic organization based in the University of the Philippines – Diliman committed to the promotion and development of Physics inside and outside the university.

The UPPA will conduct the **PISIKAAalaman 2023**, an annual inter-high school Physics quiz bee, now to be held **virtually/online** using a video conferencing software on **April 29, 2023 (Saturday)**. It is open to all **senior high schools** across the region.

Details regarding the meeting ID and password as well as the other additional softwares needed throughout the entire event will be updated to the teams who will register. Interested schools may register in the link:  
<https://tinyurl.com/PISIKAAalaman2023Reg>.

Attached herewith is the copy of the event primer that presents the mechanics and flow of this online quiz bee.

For questions and clarifications, you may contact the UP Physics Association (UPPA) via email at [uppa-org@nip.upd.edu.ph](mailto:uppa-org@nip.upd.edu.ph).

clmd/06



**Address:** Gate 2, Karangalan Village, Cainta, Rizal  
**Telephone Nos.:** 02-8682-5773/8684-4914/8647-7487  
**Email Address:** [region4a@deped.gov.ph](mailto:region4a@deped.gov.ph)  
**Website:** [depedcalabarzon.ph](http://depedcalabarzon.ph)



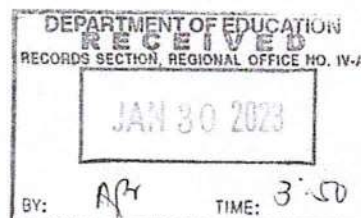
PHYSICS  
MONTH  
2023



30 January 2023

**ALBERTO T. ESCOBARTE**

Regional Director  
Karangalan ES, Karangalan Village Cainta, Rizal  
region4a@deped.gov.ph



Warm greetings from UP Physics Association!

The **UP Physics Association (UPPA)** is an established non-profit, academic organization based in the University of the Philippines - Diliman committed to the promotion and development of Physics inside and outside the university. For more than 40 years, the UPPA has constantly organized projects and events that advances the study, awareness, and appreciation of Physics among students and the general public.

The UPPA will once again organize **PISIKAalaman 2023**, an annual inter-high school Physics quiz bee, now to be held virtually/online that is geared for the K-12 curriculum of the Philippines. Since its inception in 2004, this event has been striving to provide an alternate way for students to excel in Physics through a competitive activity and to encourage them to pursue science-related programs in the future, especially Physics in the tertiary level.

Having these in mind, we are humbly requesting your office to assist us in the **promotion of PISIKAalaman 2023 to senior high schools across the region**. The event will be held **online** using a video conferencing software on **29 April 2023 (Saturday)**. Details regarding the meeting ID and password as well as the other additional softwares needed throughout the entire event will be updated to the teams who will register. Interested schools may register in this link: <https://tinyurl.com/PISIKAalaman2023Reg>

Attached is a copy of the event primer that presents the mechanics and flow of this online quiz bee. Should you have any questions, please contact us via [uppa-org@nip.upd.edu.ph](mailto:uppa-org@nip.upd.edu.ph) or through any of the given contact details in this letter.

Thank you for your kind consideration.

In the spirit of uplifting science,

Allan Jose Jr. Mesa  
Project Head for Academics  
[ajmesa@up.edu.ph](mailto:ajmesa@up.edu.ph)

Samuel Rock Salazar  
Project Head for Externals  
[uppaexternals@gmail.com](mailto:uppaexternals@gmail.com)



*UP Physics Association*

Basement, National Institute of Physics, University of the Philippines Diliman  
Diliman Quezon City 1101 | [uppa-org@nip.upd.edu.ph](mailto:uppa-org@nip.upd.edu.ph) | [facebook.com/upphysics](https://facebook.com/upphysics)

PHYSICS  
MONTH  
2023



Noted by:

Lleyton Mariscotes  
Vice President for Academic Affairs  
UP Physics Association

Mary June Ricaña  
Vice President for External Affairs  
UP Physics Association



*UP Physics Association*

Basement, National Institute of Physics, University of the Philippines Diliman  
Diliman Quezon City 1101 | [uppa-org@nip.upd.edu.ph](mailto:uppa-org@nip.upd.edu.ph) | [facebook.com/upphysics](https://facebook.com/upphysics)

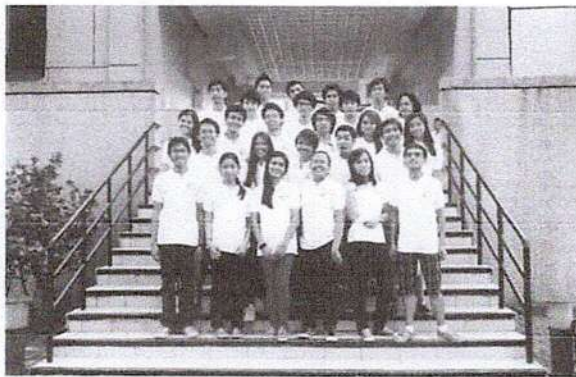
**PHYSICS  
MONTH  
2023**



#### About the Organization

## UP Physics Association

The UP Physics Association (UPPA) is an established non-profit, academic organization based in the University of the Philippines - Diliman committed to the promotion and development of Physics inside and outside the university. For more than 40 years, the UPPA has constantly organized projects and events that advances the study, awareness, and appreciation of Physics among students and the general public.



#### About the Event

## PISIKAalaman 2023

PISIKAalaman is an annual inter-high school Physics quiz bee held by the UP Physics Association and is now geared for the revised basic education curriculum of the Philippines. Since its inception in 2004, the event aims to provide an alternative way for students to excel in Physics through a competitive activity and to encourage students to pursue science-related programs in the future, especially in the tertiary level.



*UP Physics Association*

Basement, National Institute of Physics, University of the Philippines Diliman  
Diliman Quezon City 1101 | [uppa-org@nip.upd.edu.ph](mailto:uppa-org@nip.upd.edu.ph) | [facebook.com/upphysics](https://www.facebook.com/upphysics)



## RULES AND MECHANICS

### I. Registration

- A. The registration period is until **08 April 2023**.
- B. Each team that wishes to register for PISIKAAalaman must pay a non-refundable registration fee of **Four Hundred Fifty Pesos (Php 450.00)**. For Public High Schools, there is a discounted fee of **Three Hundred Fifty Pesos (Php 350.00)** per team. Registration will only be confirmed when the registration fee has been paid. All interested teams are required to register at <https://tinyurl.com/PISIKAAalaman2023Reg> on or before **08 April 2023**.
- C. Modes of payment:
- |  |   |
|--|---|
| <b>BPI</b><br>Arrienne Norfela Logarta<br>0736071349           | <b>GCash</b><br>Arrienne Norfela Logarta<br>09277486025 |
| <b>CIMB</b><br>Arrienne Norfela Agan Logarta<br>20867503770800 |   |
- D. Proof of payment for registration of the event must be sent to [uppa-org@nip.upd.edu.ph](mailto:uppa-org@nip.upd.edu.ph). Acknowledgment of payment will be sent through the registrant's/team coach's email.
- E. The details of the event contact persons are as follows:  
Mary June A. Ricaña (External Affairs VP): [maricana1@up.edu.ph](mailto:maricana1@up.edu.ph) | 0995 295 0085  
Allan Jose Jr. Mesa (Event Co-head): [ajmesa@up.edu.ph](mailto:ajmesa@up.edu.ph) | 0956 419 4710

### II. General Competition Guidelines

- A. Participants
1. All **Senior High Schools in the Philippines** are eligible to register a **maximum of two (2) teams** in the competition.





2. Each team should be composed of **three (3) participating members**. The team may also register **one (1) optional substitute member**. Only bona fide senior high school students at any level, enrolled in the participating school, are eligible to be a member of the team.
  - 2a. The three participating members are the main participants for the event.
  - 2b. In case one of the participating members cannot make it to the competition **before the start of the elimination round**, the substitute member can take the position.
3. **The substitute member may only replace one of the main participants before the start of the elimination round**. The organizers must be informed when a team decides to utilize its substitute member.
  - 3a. **Teams are only allowed to change their lineup before the elimination round**. However, further substitution is not allowed throughout the succeeding rounds.
  - 3b. In case any of the registered participants cannot make it on the day of the contest proper resulting in an **incomplete number of required team members (three - 3)**, the team will be disqualified.

**B. Registration Information Needed**

*The University of the Philippines Physics Association values the privacy and security of personal data given to us by the applicants of the said event. As an academic organization, we are committed to comply with the Data Privacy Act of 2012 (DPA) and treat the information, data, and documents uploaded with utmost confidentiality while ensuring that our genuine and legitimate interests to fully and effectively carry out responsibilities are met.*

*The University of the Philippines Physics Association holds the right to collect and use personal data given by the applicants to verify the applicant's information is true. We collect your personal data that include those you provide us during your application. The University of the Philippines Physics Association will not share your personal information with any third parties without your consent, unless the law allows us to do so.*

1. The team coach must submit to the registration google form the team's recent valid school IDs, **photos of the participants holding their respective school IDs, and proofs/certificates of enrollment** for identification purposes. The **email addresses to be used throughout the competition and contact numbers** of both the coach and each of the participating students will also be required.





2. The team coach shall provide his/her **personal Gcash number** or **Bank account information**. The team coach shall be the one responsible for the prize distribution of the winning team.

C. Devices and Accounts Needed

1. *A reliable laptop/personal computer with working camera and microphone.* Your device should be able to handle **Zoom, Discord, and a web browser all at once.**
2. *A reliable internet connection.* The competition is fully implemented online; thus, the participants need a reliable internet connection.

*Technical issues.* PISIKAalaman Quiz Bee Problems will not be displayed again if technical issues are on the participant's side. Technical difficulties include but are not limited to the following:

- a. internet disconnection and/or latency issues
  - b. hardware/device problems
  - c. electrical outage
3. *A Zoom account.* Prior to the competition, the participants Zoom name must be changed into the following format: **"Abbreviation of the school name - Team number | Family Name"**.
  4. *A Discord account.* Prior to the competition, the participants Discord name must be changed into the following format: **"Abbreviation of the school name - Team number | Family Name"**.

D. Competition Proper

1. PISIKAalaman 2023 will be held online by utilizing **Zoom, Discord, and an online quizzing platform.**
2. When entering the Zoom room, Discord server, and the online quizzing platform, the participants must follow the following username format:

**Abbreviation of the school name - Team number | Family Name**  
e.g. UPD - 01 | Cruz

3. This year, Pisikaalaman 2023 will be divided into two (2) stages: **Eliminations and Finals.**
4. Elimination Round





- a. Participants should join the PISIKAalaman 2023 Zoom room (Broadcasted through FB Live).
- b. **Breakout rooms will be created. Participating teams** will be evenly distributed throughout the breakout rooms. **Three UPPA facilitators** will be assigned per breakout room.
- c. This round will be done through an online quizzing platform. The **exam** consists of **5 parts**, with each part having **4 to 5 questions**. Each part is a group of related questions under a physics subfield. The subfields are listed below.
  - i. Classical Mechanics
  - ii. Oscillations, waves, and optics
  - iii. Electromagnetism
  - iv. Thermodynamics
  - v. Combination of any of the above 2
- d. The **Elimination round** shall run for **90 minutes**. After 90 minutes, the **UPPA-facilitator shall end the round regardless** if some individuals are still answering the questions.
- e. The exam questions will be **identical for all participants**, but the **sequence of the questions may differ**. The exam in this round will be answered individually and the team score will be composed of the sum of the individual scores.
- f. A participant is given **full points** for answering a question correctly and **0 points** otherwise.
- g. Team points are immediately available after the exam. The **top 10** teams with the **highest cumulative team points** will proceed to the **Final Round**. In case any of the members is disconnected, the disconnected participant(s) must inform the event contact persons listed in section I.E. via text message regarding their circumstance and the estimated time of return to the platform. **The elimination round will not be extended.**
- h. The top 10 teams that made it to the Final Round will be **announced** in the PISIKAalaman 2023 Zoom room (Broadcasted through FB Live). The ranked team scores of all teams **will be posted as well**. For transparency, **answers and solutions to the questions will also be released after the exam** (It will be provided within the Zoom meeting chat box).







- i. In case of a tie around the 10th rank, the tied team shall once again do another Exam until the tie is broken. This exam shall comprise 10 items to be answered for **5 minutes**. Team(s) with the **highest cumulative points** in this tie-breaking round will take the **contested slot**. The same mechanics above apply for this tie-breaking round.
- j. In case there is still a tie around the 10th rank, the **individual scores per team will be compared** and the team with the **highest individual scorer** will take the contested slot.

e.g.

After the tie-breaking round and there is still a tie around the 10th rank given by the scenario

School - Team	Individual Scores	Total Score	Rank
School A - Team 1	10, 8, 6	24	10.5
School B - Team 1	10, 9, 5	24	10.5

In this case, **School B - Team 1** will take the 10th rank.

#### 5. Final Round

- a. The final round will be conducted **1 month after the elimination round**.
- b. The final round will be conducted in **Discord**. When joining the Discord Server, be sure to **change your name with the required format** as stipulated in section II. D. 2.
- c. UPPA facilitators **will segregate the teams** into their respective **discord category**. **Participants will be assigned** their corresponding **discord roles** (team number) to restrict their accessible channels.
- d. **Each team** will be assigned with **one UPPA Facilitator** in their respective channels.
- e. Questions in this round will be answered in **teams**.





- f. Each team will be given access to a **voice and text channel**. They shall use the **voice channel** to **collaborate their answers and solutions**. On the other hand, they shall use the **text channel** for their **final answer** (Ex. "E1: 15 [kg]"). E1 signifies "Easy question 1". The units should be enclosed in **square brackets**.
- g. Each participant is required to **turn on their camera and microphone**. The camera should be able to **capture the face** of the participant.
- h. Solutions will not be shown unless when deemed necessary by the board of judges. Participants may secure themselves **clean solution papers**. The **UPPA Facilitator** of the corresponding team shall double check that the **scratch papers are clean**.
- i. This round will be divided into three parts: **Easy, Average, and Difficult**.
- j. There are **7 questions** for the **Easy round**, **7 questions** for the **Average round**, and **5 questions** for the **Difficult round**.
- k. The pointing scheme for each round is as follows: **Easy – 2 pt; Average – 3 pts; and Difficult – 5 pts**.
- l. Answering time for each question in each round will be as follows: **Round 1 – 45 seconds; Round 2 – 90 seconds; Round 3 – 135 seconds**. The timer will start after the second reading.
- m. The questions will be read by the Emcee and should be broadcasted through **FB Live**. The Zoom room should then be **"share screened"** by the team's corresponding discord UPPA-facilitator.
- n. **The questions will be read twice**. For the first reading, the participants must raise their hands visible in their video feed. They are only allowed to start solving after the first reading. A warning will be given each time the participants start writing and solving during the first reading.
- o. The UPPA facilitator will send a **"TIMES UP"** message to the text channel and answers sent before this message will be accepted. Teams may send **multiple answers** but **only the latest answer will be credited**.





- p. In case any of the participating members get disconnected in the middle of the question, the following conditions will be enforced:
- o.i. If the team was able to send an answer before a member gets disconnected, the latest answer will be considered as the **FINAL ANSWER** and will be credited in case the answer is correct. However, if the member can reconnect before the end of the timer, the team can change their answer.
  - o.ii. If the team was not able to send an answer before a member gets disconnected and the disconnected member cannot return before the end of the timer for that question, the team will not be able to get points.
  - o.iii. If the disconnected member cannot return for the next questions, the team will not be able to gain any points unless the disconnected member was able to reconnect.
  - o.iv. If the disconnected member cannot reconnect within 15 minutes, the team will be disqualified.
- q. The **Top 3 teams with the highest number of points** will be awarded as the Champion, First Runner-up, and Second Runner-up. Winners will receive a cash prize provided through Gcash.
- r. In case of a tie for the top three places, a **Clincher round will take place**, consisting of **five (5) questions** with each question having a specified amount of time to answer and with varying points. The ranks will be determined based on the team scores in this round.
- s. If the Clincher round can't break the tie, a **Sudden Victory round** will occur. Questions will be given until a team fails to answer a question, resulting in elimination. **The last team standing wins the Sudden Victory round.**
6. In the case when a contestant(s) has any concerns regarding the answer, he/she shall inform their corresponding UPPA Facilitator. The UPPA Facilitator will then inform the emcee. The emcee will voice the question, then the board of judges will be inclined to address the concern. **Decisions made by the said board will be final and irrevocable.** Concerns must be raised immediately before proceeding to the next question, else, would be deemed invalid.





7. The said board also has the power to void a question.
8. Only a contestant has the right to raise a concern. Any comments and concerns from the audience members (advisers included) will not be entertained.
9. **Non-graphing scientific calculators are allowed.** Before each stage starts, contestants are required to show their calculators for inspection and resetting. **Programming softwares is not allowed.**
10. A link of the **Formula sheets** containing general formulas and equations will be provided by their corresponding UPPA Facilitator. However, contestants are highly discouraged to rely solely on these formula sheets. Participants are advised to familiarize themselves with useful and necessary equations.
11. **Cheating in any form will NOT be tolerated.** Contestants/teams that are proven guilty of cheating will automatically be disqualified. Common forms of cheating includes: searching the internet during the contest proper, attempting to transfer to other discord categories with the intent of copying the opponent's answers, communication beyond the provided discord voice channel, using a cheat sheet beyond the provided Formula sheet, and change of participants after the elimination round.
12. Teams who qualified for the final round **should enter the Zoom/Discord channel on time.** Qualified teams **who failed** to be within the Zoom/Discord channel **ten (10) minutes** after the designated time **will be disqualified.**

### III. Prizes

- A. The top three teams will be named as the **Champion, First Runner-up, and Second Runner-up respectively**, and shall receive their corresponding cash prizes through Gcash.
- B. Cash prizes shall be given to the said top three teams.  
*Champion – Php 5,000*  
*First Runner-up – Php 3,000*  
*Second Runner-up – Php 2,000*
- C. Certificates of participation shall be given to all the contestants and advisers at the end of the event through email.





## TOPIC COVERAGE

The topics included will come from the General Physics curriculum of senior high school students following the STEM track.

### General Physics I

Vectors

Kinematics: Motion Along a Straight Line, in 2-Dimensions and in 3-Dimensions

Newton's Laws of Motion

Work, Energy, and Conservation of Energy

Center of Mass, Momentum, Impulse, and Collisions

Rotational equilibrium and rotational dynamics

Mechanical Waves and Sound

Temperature and Heat, Ideal Gasses, and the Laws of Thermodynamics

### General Physics II

Electrostatics (Electric Charge, Electric Fields, Electric Flux and Electric Potential)

Capacitance and Dielectrics

Current, Resistance, and Electromotive Force

DC Circuits

Magnetostatics

Light as an Electromagnetic Wave

Geometric Optics

Interference and Diffraction

Galilean Relativity

### Recommended mathematical skill(s)

Basic calculus (SHS)

Trigonometry (SHS)

### Recommended references

Any fundamentals of Physics academic material. University-level materials may also help in the preparation for the competition.

