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Department of Education
NATIONAL CAPITAL REGION

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In compliance with DepEd Order No. 8, s. 2013
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**31ST PSME MONTH CELEBRATION AND THE NATIONAL MECHANICAL
ENGINEERING STUDENT CONVERGENCE (NMESC) 2024 - ROBOTICS**

Attached is a communication from the Philippine Society of Mechanical Engineers – University of the Philippines Student Unit (PSME-UPSU), Inc., dated September 9, 2024, regarding the **31st PSME Month Celebration and the National Mechanical Engineering Student Convergence (NMESC) 2024 - Robotics**. The letter contains details of the event scheduled for September 28, 2024, which will be held at Melchor Hall, University of the Philippines Diliman.

The event will feature various activities, including robotics competitions, engineering workshops, and interactions with industry professionals. Senior high school students are encouraged to participate as it will provide a valuable opportunity for skill development in engineering and robotics.

For further queries and coordination, please contact **Rafael Christopher Yabut**, NMESC 2024 Overall Co-Head, via email at psmemonth.pmseupsu2024@gmail.com.

Immediate dissemination of this advisory is requested.

Encl.: As stated

rir/CLMD



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PHILIPPINE SOCIETY OF MECHANICAL ENGINEERS
UNIVERSITY OF THE PHILIPPINES STUDENT UNIT INC.

3/F Melchor Hall, College of Engineering, University of the Philippines
Diliman Quezon City 1101

September 9, 2024

DR. JOCELYN DR ANDAYA
Regional Director, DepEd-NCR

Dear Dr. Jocelyn DR Andaya:

Greetings!

We are the **Philippine Society of Mechanical Engineering – University of the Philippines Student Unit (PSME-UPSU), Inc.**, a duly recognized organization based at the College of Engineering, University of the Philippines Diliman. Each year, our organization initiates various projects aimed at (1) promoting academic excellence among Filipino students and helping them realize their potential in the field of science, technology, engineering, and mathematics; (2) developing and strengthening ties with other organizations and institutes; and (3) instilling values to serve the country with passion and integrity.

This year, PSME-UPSU, Inc. will hold its 31st PSME Month in a face-to-face setting, themed **TRANSCEND: Beyond the Leading Edge**. One of the flagship events that will be held this year is **National Mechanical Engineering Student Convergence (NMESC) - Robotics**. This one-day event, focused on robotics, will introduce students nationwide to engineering through workshops, competitions, and interactions with various related companies. **NMESC 2024 - Robotics** will be held on **SEPTEMBER 28, 2024, at Melchor Hall**, under the theme **NMESC 2024: From Concept to Creation! Design. Conquer. Build the Future**. The event aims to showcase the skills and knowledge gained by the participants in the robotics workshop through competition. This is an excellent opportunity for students to enhance their skills by competing with one another and engaging in an intensive hands-on learning experience.

To reach a lot of schools and students for the event to be more effective, PSME-UPSU's NMESC heads would like to seek an endorsement from your good office. Your endorsement will be a big help to senior high school students who want to join the said event.


Attached are our invitation to schools and guidelines about the event. Thank you in anticipation of your immediate action of the above matter.

Respectfully,


Rafael Jericho Yabut
NMESC 2024 Co-Head


Hart Roel Valdesancho
PSME Month 2024 Overall Co-Head


Trisha Mae Roque
NMESC 2024 Co-Head


Ansherina Rodriguez
PSME Month 2024 Overall Co-Head



NMESC ROBOTICS

INTER-UNIVERSITY MECHANICAL ENGINEERING ROBOTICS COMPETITION

NMESC-Robotics is an inter-university National Mechanical Engineering Robotics Competition where teams of three (3) will strategize to measure their knowledge in the field of Mechanical Engineering specifically in robotics. The event aims to gauge teamwork, creativity, and technical problem-solving of potential Mechanical Engineers from different institutions and challenge themselves in an under-pressure environment.

Our organization would like to invite you to be part of this great competition. Attached here are the guidelines, rules, and mechanics, as well as the waiver and registration forms needed. Please do not hesitate to forward questions to our Communications officers. If you have any problems regarding registration, please reach out to us and we will do our best to accommodate you.

Program Details	Time	Venue
Checking for Registration	7:30 – 8:45 AM	Foyer Melchor Hall
Opening Program	9:00 – 9:10 AM	P&G Melchor Hall
Expert Presentation	9:10 – 10:10 AM	
Workshop Proper	10:10 – 11:50 AM	
Contest Introduction	11:50 AM – 12:10 PM	
Lunch Break	12:10 – 1:40 PM	
Contest Proper	1:40 – 3:40 PM	P&G Melchor Hall
Awardings	3:40 – 4:00 PM	P&G Melchor Hall



REMINDERS AND GUIDELINES

I. PARTICIPANTS

1. NMESC-Robotics Inter-University is open to all undergraduate students in the Philippines.
2. A participating team shall consist of three (3) members, regardless of year level, currently enrolled in an undergraduate program at their college or university. All team members must belong to the same college or university.
3. One (1) alternate is allowed per team and must satisfy all terms stated in item number two (2). The alternate must also be registered before the event.
4. Each school may send a maximum of two (2) teams to participate in the competition.
5. One (1) coach per college/university is required to accompany their participants.
6. Participants and alternates **MUST** present any proof of enrollment in the current academic year from their respective schools. They must bring and wear their IDs at the event premises.
7. In the unfortunate case that a pre-registered participant is unable to attend the event, given that they have a valid reason, the alternate will be allowed as a replacement.
8. **NO WALK-IN** teams and alternates will be entertained on the day of the event.

II. EVENT MECHANICS

A. Objective:

- a. The primary goal of the competition is for teams to design, build, and operate a robot equipped with a functional catapult. The robot must throw discs into a Tic-Tac-Toe grid, aiming to achieve three discs in a row (horizontally, vertically, or diagonally) before the opposing team does.

B. Team Structure:

- a. Team Size: Teams should consist of three members each.
- b. Roles: The roles of each member will be discussed in the Game Mechanics section.

C. Robot Construction:

- a. Base Kit and Components:
 - i. Teams will be provided with a base robot kit and additional components to build a robot car with a functional catapult.
- b. Movement and Catapult:
 - i. The robot must be capable of moving across a specified arena and accurately launching discs into the grid.



- ii. The catapult mechanism can be designed from scratch or modified from the base kit provided to teams.

D. Game Mechanics:

- a. Robot Construction: Each team must design and construct one robot that can be remotely operated. The robot must include a catapult mechanism designed to launch discs into the grid.
- b. Control, Reloading, and Strategy:
 - i. One student will manage the robot's movements and aiming.
 - ii. The other student will handle reloading discs into the robot's catapult.
 - iii. A third team member will assist with general tasks such as observing gameplay and communicating strategy. Note that the third team member is the only participant allowed to speak during the competition.
- c. Student-Only Operation: Only students are allowed to operate the robot and manage the reloading process during the competition. Coach supervision is permitted for safety, but not during actual gameplay.

E. Game Play:

- a. Classic Tic-Tac-Toe: Teams will play a "simultaneous" version of Tic-Tac-Toe using their robots.
 - i. Objective: The aim is to throw discs into a Tic-Tac-Toe grid to achieve three discs in a row (either horizontally, vertically, or diagonally) before the opposing team does.
 - ii. Simultaneous Play: There are no turns; both teams will be competing at the same time, making both speed and accuracy vital to success.
 - iii. Game Area:
 - 1. There will be a designated Game Area where only the robots are allowed to operate.
 - 2. A separate Player Area will be assigned where the team members controlling and reloading the robots must remain during the match.
 - iv. Timing: Each match will last for 3 minutes.
 - v. No Overwrites: once a grid space has a disc in it, that space is locked. Any attempt to shoot into an already-occupied space will be considered invalid, and the shot will not count.

F. Rules:

- a. Non-Interference: Teams must not interfere with or tamper with the opposing team's robot. Any attempt to do so will result in immediate disqualification from the match.
- b. Restricted Area: Players must not enter the restricted game area designated for robots only. All player actions must be done from the player area.



- c. Grid Platform Integrity: Robots must not tamper with or destroy the grid platform. Any damage caused by a robot to the grid may result in disqualification.
 - d. 3-Minute Time Limit: All teams must finish their gameplay within the designated 3-minute time limit per match.
 - e. Additional Rules: The technical committee may impose additional fair play rules as needed to ensure a smooth and competitive event.
- G. Winning Conditions:
- a. Cases:
 - i. Case 1: The game ends when a team successfully places three of their discs in a row, just like in a traditional Tic-Tac-Toe game.
 - ii. Case 2: If the timer runs out and no team has made a row, the team with the greatest number of discs shot inside the grid wins the game.
 - iii. Case 3: If the number of discs shot inside the grid is the same for both teams, the team that throws the fewest discs throughout the game wins.
 - iv. Case 4: If the number of discs thrown is also equal, the match is called a "draw."
 - b. Ties or Unresolved Games: If no team wins within the 3-minute window, the team who put the disc inside the grid first will be the winner.
- H. Additional Gameplay Details:
- a. Further details, rules, and winning conditions will be provided on the day of the event.



IV. AWARDS

Certificates

- Certificate of Participation (for both workshop + competition) for all Contestants and Coaches
- Certificate of Recognition for Reaching the top 3 (team members + coach)

2nd Runner-Up

- Php 2,000.00
- NMESC 2024 2nd Runner-Up Banner Board
- Certificates
- Medals

1st Runner-Up

- Php 3,000.00
- NMESC 2024 1st Runner-Up Banner Board
- Certificates
- Medals

CHAMPION

- Php 5,000.00
- NMESC 2024 Champion Banner Board
- Certificates
- Medals

NOTE:

- Additional/Other privileges may be announced at a later date.
- Names written in the registration form will be used for the certificates. Failure to properly spell names in the registration form will not be the fault of the organizers. Certificates will not be reprinted in such cases.



V. EXTERNALS

The official NMESC–Robotics representatives will answer your questions, clarifications, concerns, and other needs for the competition. You may contact them using the following available means.

A. For registration queries, the following representatives are here to assist you:

REPRESENTATIVE	MOBILE NUMBER	EMAIL ADDRESS
Hans Albert Sengco	0927 406 0509	psmemonth.nmesc@gmail.com
Jose Rafael Locsin	0998 959 0128	

B. For concerns regarding the registration fee and/or anything related to the finances connected to the competition, the following people are here to assist you:

REPRESENTATIVE	MOBILE NUMBER	EMAIL ADDRESS
Rod Justin Maligad	0920 283 6286	psmemonth.nmesc@gmail.com
Ansherina Mae C. Rodriguez	0976 344 5139	

VI. EMAIL FORMAT

- A. Our official PSME Month email address is:
 - a. psmemonth.psmeupsu@gmail.com
- B. Your email must follow the following format:
 - a. Email recipient: psmemonth.psmeupsu@gmail.com
 - b. Email subject: NMESC_<SchoolName>
 - i. (ex: NMESC_University of the Philippines Diliman)
 - c. Body: Please indicate the COMPLETE NAME of your college's/university's CONTACT PERSON with his/her MOBILE NUMBER and EMAIL ADDRESS. Also, if you have any other concerns, please put them here.
- C. After sending the email, please wait for the assigned person to reply to your concern. If one (1) week has already lapsed and we did not reply to your concern, please don't hesitate to send us again an email asking for a follow-up regarding your concern.



VII. REGISTRATION AND PAYMENT PROCEDURE

- A. Registration will be done before the event. No walk-in teams will be entertained during the event.
- B. The participating colleges/universities must accomplish the Registration Google Forms sent through their email. Alternatively, please click here to open the registration form.
- C. The forms must be accomplished on or before September 13, 2023. All documents (logos, proof of enrollment, proof of payment, etc.) must be passed together.
- D. The registration fee will differ based on the bundle that the participants will choose. This is dependent on the college events of PSME Month 2024 that they will attend and participate in. Refer to the Registration Google Forms regarding the amount of fee needed to be settled.
- E. Payments must be sent to any of the following accounts:

PLATFORM	ACCOUNT NUMBER	NAME
GCash	0920 283 6286	Rod Justin Maligad
BPI	1319 3137 17	Rod Justin Maligad

- F. Once the requirements have been submitted, they will be validated. An email will then be sent to the coach's email confirming their registration.
- G. If some documents would require resubmission, an email requesting such documents will also be sent to the coach, telling them to resubmit through the email thread. The team's slot would only be confirmed once all documents have been settled.