

for posting



Republic of the Philippines
Department of Education
NATIONAL CAPITAL REGION
SCHOOLS DIVISION OFFICE OF MUNTINLUPA CITY

Division Advisory No. 011, s. 2025

FEB 25 2025

February 24, 2025


In compliance with DepEd Order (DO) No. 8, s. 2013
This advisory is issued for the information of DepEd Officials,
Personnel/Staff, as well the concerned public

MACHINE DESIGN SUMMIT (MDS) 2025



Attached is an e-mail from Mr. John Martin S. Romero, MDS 2025 School Affairs Head, dated February 13, 2025, on the above-captioned title, the contents of which are self-explanatory, for the information and guidance of all concerned.

Participation of public and private schools shall be subject to the no disruption of classes policy stipulated in DepEd Order No. 9, s. 2005 titled, Instituting Measures to Increase Engaged Time-on-Task and Ensuring Compliance Therewith.

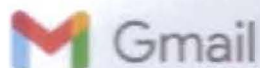
KSJT / MACHINE DESIGN SUMMIT 2025

 / FEBRUARY 24, 2025



 Student Center for Life Skills Bldg., Centennial Ave, Brgy Tunasan,
Muntinlupa City
 (02) 8805 - 9935, (02) 8805 - 9940
 sdo.muntinlupa@gmail.com





SDO Muntinlupa <sdo.muntinlupa@gmail.com>

Machine Design Summit 2025 Invitation to Schools

1 message

upgps@coe.upd.edu.ph <upgps@coe.upd.edu.ph>
To: sdo.muntinlupa@gmail.com

Thu, Feb 13, 2025 at 12:19 PM



Greetings, **EVANGELINE P. LADINES!**

The UP Gears and Pinions is holding its annual flagship event, the **Machine Design Summit 2025: Synergy in Motion** on **March 21-22, 2025**. In this ninth iteration, the event aims to highlight the essence of teamwork and interdisciplinary collaboration in machine design, underscoring how different fields work hand-in-hand in tackling real-world problems and developing innovative solutions.

Last February 7, 2025, the **Department of Education (DepEd)** issued an Advisory (Advisory No. 020, s. 2025) regarding MDS 2025. The document reflects the adherence of the competition to the standards and goals set by the DepEd.

In line with this, we would like to humbly request your assistance in sending invitations to various schools under your good office. We believe that your help in this matter will help us achieve our collective goals of serving the Filipino students of the future.

Attached are pertinent documents which you can disseminate. Alternate links for event registration can also be found below.

[3DR]: bit.ly/3DRRegistration2025

[WORKSHOP]: bit.ly/WorkshopRegistration2025

Thank you very much!

General Primer**DepEd Advisory**

JOHN MARTIN S. ROMERO

MDS 2025 School Affairs Head

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Advisory No. **020**, s. 2025

February 7, 2025

In compliance with DepEd Order (DO) No. 8, s. 2013
this advisory is issued not for endorsement per DO 28, s. 2001,
but only for the information of DepEd officials,
personnel/staff, as well as the concerned public.
(Visit www.deped.gov.ph)

MACHINE DESIGN SUMMIT 2025

The University of the Philippines Gears and Pinions (UP GPs), the premier mechanical engineering student organization of UP Diliman, will be hosting its ninth Machine Design Summit (MDS) with the theme, Synergy in Motion, to be held at UP Diliman, Quezon City on March 21–22, 2025.

The MDS 2025 highlights teamwork and interdisciplinary collaboration in machine design, underscoring how different fields work hand-in-hand in tackling real-world problems and innovative solutions. It also aims to serve as a platform to share holistic and valuable knowledge in machine design with the participants.

Participants from schools and universities nationwide will devise and design machines through digital platforms or present an actual working prototype, depending on the four major events that comprise this summit: 1) 3DR, 2) Workshop, 3) Inter-High, and 4) Inter-U.

Interested participants may sign up until February 14, 2025, through the links below.

Registration Link	Participants
https://bit.ly/HSRegForm2025	For Inter-High participants: open to high school students only
https://bit.ly/UGRegForm2025	For Inter-U participants: open to undergraduate students only
https://bit.ly/WorkshopRegForm2025	For Workshop participants: open to high school and undergraduate students only
bit.ly/3DRRegForm2025	For 3DR participants: open to everyone

Participation of learners and teachers from public and private schools shall be purely voluntary and will not hamper instructional time in compliance with the provisions of DepEd Order (DO) No. 022, s. 2023 titled Implementing Guidelines on the School Calendar and Activities for the School Year 2023–2024 and DO 9, s. 2005 titled Instituting Measures to Increase Engaged Time-on-Task and Ensuring Compliance Therewith and the policy on off-campus activities stated in DO 66, s. 2017.

For more information, please contact:

Mr. John Martin Romero/Ms. Samantha Coleene Cano
School Affairs Heads, Machine Design Summit 2025
UP Gears and Pinions
Mobile Phone Nos.: 0929-824-8684 and 0995-728-8868
Email Addresses: jsromero@up.edu.ph;
sbcano@up.edu.ph; and
machinedesignsummit@gmail.com
Facebook Page: <https://www.facebook.com/MachineDesignSummit>



MACHINE DESIGN SUMMIT 2025

SYNERGY IN MOTION



MACHINE DESIGN SUMMIT 2025

The **Machine Design Summit (MDS)** is an annual event organized by the UP Gears and Pinions, gathering students from high schools, colleges, and universities nationwide to engage in various design challenges. The summit allows participants to immerse themselves in the field of mechanical engineering through a series of **competitions, workshops, and conferences** geared towards enhancing their skills and knowledge in design and innovation. The key segments of the event include the **(1) 3DR, (2) Workshop, (3) Inter-High, and (4) Inter-U**.

This year, MDS marks its ninth iteration with the theme **"Synergy in Motion."** The summit will highlight the essence of teamwork and interdisciplinary collaboration in machine design, underscoring how different fields work hand-in-hand in tackling real-world problems and developing innovative solutions. MDS 2025 will provide a platform to impart holistic and valuable knowledge in machine design on participants from different schools and universities.



3DR



WORKSHOP



INTER-HIGH



INTER-U

ABOUT



UP GEARS AND PINIONS

Established in 1955, the UP Gears and Pinions (UP GPs) stands as the **leading organization for mechanical engineering (ME) students at UP Diliman**. It was conceived with the noble objective of providing a supportive and cohesive community for ME majors, **fostering a spirit of camaraderie** while also serving as a platform for **promoting academic excellence**. Membership in this esteemed organization is a testament to the students' resilience, as they actively engage in demonstrating leadership, innovation, and a commitment to service.

The organization has consistently demonstrated its commitment to promoting science and technology through various activities that extend beyond traditional engineering. Its flagship events include **RevUP! The Diliman Motorshow**, a platform for automotive enthusiasts to showcase their vehicles, and the **Machine Design Summit**, a series of activities aimed to promote the role of mechanical engineering in the advancement of the nation. These initiatives were strategically developed to augment members' skills beyond the confines of academic learning, showcasing the UP GPs' dedication to nurturing well-rounded individuals capable of becoming versatile engineers in the future.

LAST YEAR'S ACCOMPLISHMENTS

Over the years, the Machine Design Summit has consistently achieved its goals and objectives through the four major events. Here are some of the highlights from last year's iteration!

INTER-HIGH

Proposal in innovating the traditional wheelchair

79 PARTICIPANTS

composed of 18 competing teams from various high schools in the Philippines



29 PARTICIPANTS

consisting of 6 teams competed for the Finals stage



LAST YEAR'S ACCOMPLISHMENTS

INTER-U

Development of a miniature wind energy turbine system using recycled materials.

8 PARTICIPATING TEAMS
from 8 distinguished universities



3DR

Live Talks of esteemed guests on their field of expertise with **116 ATTENDEES**



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LAST YEAR'S ACCOMPLISHMENTS

WORKSHOP

Discussed and imparted hands-on skills in simple power generation.

40 PARTICIPANTS
from 8 teams



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TIMELINE OF EVENTS

EARLY BIRD REGISTRATION PERIOD
12/13/2024 - 01/02/2025

GENERAL REGISTRATION PERIOD
01/03/2025 - 02/14/2025

EXCEPT FOR INTER-HIGH CUTOFF IS ON 01/24/2025 AT 11:59 PM

INTER-HIGH PRE-FINALS DEADLINE
02/15/2025

INTER-HIGH FINALS DEADLINE
03/01/2025

MDS 2025 DAY 1
3DR AND WORKSHOP
03/21/2025

MDS 2025 DAY 2
INTER-HIGH AND INTER-U
03/22/2025

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GENERAL GUIDELINES

REGISTRATION FORMS

Registration for MDS 2025 is open from **December 13, 2024, to February 14, 2025**. Except for **Inter-High** which is only until **January 24, 2025 at 11:59 PM**.

Participate and sign up through the links below:

INTER-HIGH

bit.ly/HSRegistration2025
open to **HIGH SCHOOL STUDENTS** only

INTER-U

bit.ly/UGRegistration2025
open to **UNDERGRADUATE STUDENTS** only

WORKSHOP

bit.ly/WorkshopRegistration2025
open to **HIGH SCHOOL** and **UNDERGRADUATE STUDENTS** only

3DR

bit.ly/3DRRegistration2025
open to **EVERYONE**

[@aylabdyplis](#) [@upgearsandpinions](#) [linkedin.com/upgearsandpinions](#) [machinedesignsummit@gmail.com](#)

REGISTRATION FEE

Avail the registration fees at discounted rates through the **Early Bird Promo** that runs until **January 2, 2025**. Register now!

Event	Regular Rate	Early Bird Rate
Inter-High	PHP 1200.00	PHP 999.00
Inter-U	PHP 1200.00	PHP 999.00
Workshop	PHP 300.00	PHP 250.00
3DR	PHP 120.00	—

Inter-High and **Inter-U** participants who wish to join the **Workshop** event will get a **50-peso discount (per head)** to their **Workshop** registration fee!

Note: We will strictly implement a **No Refund Policy**. Please ensure that you are eligible for the event you are registering for.

PAYMENT CHANNELS

PHILIPPINE NATIONAL BANK

Account Holder: UP Gears and Pinions Inc.

Account Number: 108610021731

PAYPAL

Account Holder:
Lance Esrac Matthew Calamiong

Account Number:
0908 599 6275

GCASH

Account Holder:
Lance Esrac Matthew Calamiong

Account Number:
0908 599 6275

Reminder: The **Proof of Payment** must be uploaded in the **Registration Form** to confirm your participation in the summit.

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PARTICIPANT LIMIT

Each event can only accommodate a specific number of teams or participants on a **FIRST-COME, FIRST-SERVED BASIS**, as detailed below.

Event	Maximum Number
Inter-High	No Limit
Inter-U	12 Teams
Workshop	60 Participants
3DR	195 Participants

CONFIRMATION OF REGISTRATION



Registrants will only be considered as **Official Participants of MDS 2025** once their registration is **confirmed via email**.

Specific event guidelines will be sent to the participants or team representatives through their provided email addresses.

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INTER-HIGH

TENACITY AMIDST ADVERSITY: CREATIVE STRATEGIES IN FLOOD RISK MITIGATION

Inter-High is a competition that allows high school students to showcase their creativity and knowledge in designing innovative solutions to reduce flood risks in vulnerable communities.

The task is to transform traditional flood mitigation approaches by developing simple yet effective innovations that consist of mechanical and electrical components to improve community resilience and help them perform critical tasks independently during flood events.

Participants are challenged to think creatively and design solutions that empower communities to overcome the adversities of flooding with practical and sustainable strategies.

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WHAT'S NEW?



This year's Inter-High Competition takes an exciting step forward with the introduction of the **NGO-Community Partnership**. We have collaborated with an NGO that works directly with flood-prone communities to bring a new layer of insight to the competition. Through this partnership, students will have the unique opportunity to interact with both the NGO and the community during the Community Talk segment.

In this session, participants will engage with community members to hear firsthand about the challenges they face when dealing with floods. This direct connection will help students gain a deeper understanding of real-world problems, enabling them to design more practical, relevant, and impactful solutions. By integrating the voices of the community into the design process, we aim to better equip students to create innovations that can truly make a difference.

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INTER-HIGH MECHANICS

INTER-HIGH MECHANICS

TEAM COMPOSITION

- Each team shall be composed of **three to four members**.
- Maximum of two teams per school.
- Teams can either be composed of Junior High School students, Senior High School Students, or both.
- Teams may be accompanied by one adviser during the competition.

PRE-FINALS

- The output will be the following:
 - An idea primer, consisting of an infographic presenting the design, which may be in the form of a 3D model or sketch.
 - Snapshots of pertinent views of your design. No specific views will be asked. Feel free to submit snapshots you deem relevant to the judging process.
 - Submitted views must be compiled in one PDF with a maximum of 10 snapshots. Strictly no annotations and explanations.
 - Bill of Materials following the provided template by the Inter-High team. This shall be used for costing references as the judges evaluate your output.
- The participants may opt to include a QR code in the infographic should they choose to present an audio-visual presentation for their design.
- Submissions will end on **February 15, 2025, at 12:00 pm**. These will be judged accordingly by a panel of judges once the idea primers have been submitted.
- The top 10 finalists will be announced through the Machine Design Summit Facebook page on **February 22, 2025**.

FINALS

- The finalists will receive feedback for their initial output. These teams will be given eight days to revise and finalize their outputs for their presentation.
- The qualified finalists will submit their final infographic on or before **March 1, 2025, 11:59 p.m.** to the MDS Inter-High email: mds.interhigh@gmail.com and present their solutions to a panel of judges on **March 22, 2025**, in UP Diliman.
- The presentations of the Top 10 will be held from 8:00 a.m. to 12:00 p.m.
- Each team will be given a maximum of 5 minutes to present their solutions. The finalists may create a 3D model and/or a prototype to aid them in their final presentation.
- All members of the team **MUST** be present during the presentation. If there are any concerns regarding your presentation schedule, please email us at mds.interhigh@gmail.com as soon as possible.
- After the presentation, the judges may ask questions and probe the solutions presented by the finalists. Finalists are expected to defend their ideas accordingly.
- The top 3 winners will be announced on the same day at the MDS Culmination.

CRITERIA FOR JUDGING

The participants' outputs shall be judged based on the following sets of criteria:

PRE-FINALS CRITERIA	
Problem Statement	10%
Visual Appeal	10%
Sustainability and Replicability	20%
Infographic Content	20%
Overall Design	40%

FINALS CRITERIA	
Social Impact	5%
Pitch Presentation	20%
Design Specifications	35%
Feasibility and Viability	40%

PRIZES

The top three teams will receive the following cash prizes, along with a certificate with the names of the team members:

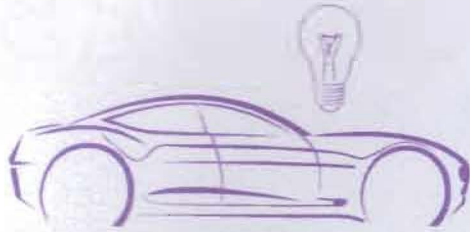


INTER-U

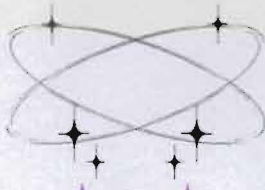
**STRONG CAR CHALLENGE:
GOING BEYOND THE SUM OF ITS PARTS**

Enter the world of engineering with the Strong Car Challenge, where you will design and build a powerful mini vehicle using recyclable materials and limited resources under time constraints. Your task is to create a car capable of withstanding increasing weights while demonstrating speed, stability, and innovation. This competition challenges teams to strike a balance between performance, load-bearing capacity, resourcefulness, and sustainability, all while pushing the boundaries of engineering precision and teamwork.

WHAT'S NEW?



The **"Strong Car Challenge"** embodies the theme "Synergy in Motion" by merging innovation, teamwork, and engineering precision into a dynamic competition. Participants will showcase their practical problem-solving skills while promoting the harmonious integration of mechanical and structural components, reflecting the complexities of real-world engineering projects.



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INTER-U MECHANICS



TEAM COMPOSITION

- Each team shall be composed of **four to five members**.
- Maximum of two teams per university.
- Teams must be composed of undergraduate students and may be accompanied by one adviser during the competition.

Note: The adviser cannot directly help participants in the creation process. They will only serve as guides.

SHOWTIME! PRESENTATION

- Teams will present their minicars, providing a short explanation of their design, functionality, and innovative features.
- Each team will describe the core structure of their vehicle, highlighting how it has been engineered to carry increasing weights while maintaining mobility.
- This segment gives participants the opportunity to demonstrate their problem-solving strategies, material choices, and the integration of mechanical components, all while justifying how their design effectively tackles the challenges of the competition.

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INTER-U MECHANICS



TOO FAST, TOO STRONG RACING

- Teams will race their minicars along a straight track while carrying progressively heavier loads.
- The challenge is to maintain speed and control the weight with each round, testing both the strength and agility of the minicars.
- The faster your car crosses the finish line while carrying the load for each round, the higher your score!

BREAKPOINT! LIMIT TESTING

- This segment pushes the boundaries of endurance, as teams subject their minicars to a stationary test of strength.
- Teams will have 3 tries to input the weight of their choice. The goal is to see how heavy the car can endure. Teams can utilize all three chances to see if their car can still carry more weight. Teams can also opt to not use all three chances.
- Teams that achieve the highest weight capacity with the least number of tries will dominate this segment.

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CRITERIA FOR JUDGING

The final winners will be determined by evaluating the teams' performances in three segments.

SHOWTIME! • Creativity, Functionality, & Innovative Features • Aesthetic	25% 20% 5%
TOO FAST, TOO STRONG	50%
BREAKPOINT!	25%

PRIZES

All participants will be given certificates for attending the event. The winning teams, however, will be receiving medals as well as cash prizes indicated below:



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WORKSHOP

FROM CONCEPT TO CREATION: BUILDING MACHINES FROM THE GROUND UP

This workshop will dive into the fundamentals of **Computer-Aided Design (CAD)**, empowering participants to design 3D models from scratch. Attendees will also gain hands-on experience with CAD software, allowing them to appreciate the practical applications of their newly acquired CAD skills. Guided by experienced facilitators, this interactive workshop is the ideal platform to ignite your imagination, hone your problem-solving abilities, and test your technical expertise.

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WHAT'S NEW?



In this exciting workshop, participants will not only engage in the current hands-on project but also learn versatile skills that extend beyond the event itself. By mastering practical techniques and gaining insights into innovative tools, attendees will be equipped to apply their newfound expertise in a variety of future challenges and creative projects. Whether it's for personal endeavors or professional growth, this workshop empowers you to take your skills to the next level, making them valuable in multiple contexts!



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EVENT TIMELINE

WHEN

**March 21, 2025
1:00pm to 5:00pm**

WHERE

UP Diliman, Quezon City

TIME	ACTIVITY
1:00-1:10 PM	Opening Remarks
1:10-3:10 PM	Lecture
3:10-4:40 PM	Hands-on Activity
4:40-4:50 PM	Presentation of Designs
4:50-5:00 PM	Closing Remarks

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3DR

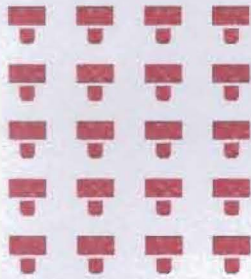
THREE DISCUSSIONS ON RESEARCH, RECREATION, AND REAL LIFE

The Three Discussions on Research, Recreation, and Real Life (3DR) is a series of live talks from esteemed guests in the academe, engineering industry, public service, and other equally admirable ventures.

This sub-event is open to anyone interested.

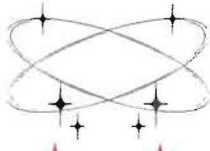
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WHAT'S NEW?



With the focus of **"Synergy in Motion"**, this year's talks would pave the way on how various disciplines alongside mechanical engineering can collaborate in generating innovative solutions to real-world problems. The event aims to impart the proper tools and wisdom for the participants to be able to utilize in their respective backgrounds.

With a newly added registration fee of Php 120, the participants would have a surplus of benefits to their disposal such as guaranteed snacks & drinks, and an exclusive token of appreciation commemorating the event.



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EVENT TIMELINE

WHEN

March 21, 2025
9:00am to 12:00pm

WHERE

UP Diliman, Quezon City

TIME	ACTIVITY
8:45 - 9:05 AM	Registration Provision of Food and Snacks Ingress
9:05 - 9:10 AM	Introduction for Speaker 1
9:10 - 9:40 AM	Speaker 1 - Talk
9:40 - 9:55 AM	Q and A and Awarding of Certificate for Speaker 1
9:55 - 10:00 AM	Introduction for Speaker 2
10:00 - 10:30 AM	Speaker 2 - Talk
10:30 - 10:45 AM	Q and A and Awarding of Certificate for Speaker 2
10:45 - 10:55 AM	10 Minute Break
10:55 - 11:00 AM	Introduction for Speaker 3
11:00 - 11:30 AM	Speaker 3 - Talk
11:30 - 11:45 AM	Q and A and Awarding of Certificate for Speaker 3
11:45 - 12:00 PM	Closing Remarks Distribution of Tokens & Picture Taking Egress

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CONTACT US

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SOCIALS

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MACHINE DESIGN SUMMIT 2025

SYNERGY IN MOTION



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