



UNIVERSITI
MALAYA

IChemE

ADVANCING
CHEMICAL
ENGINEERING
WORLDWIDE



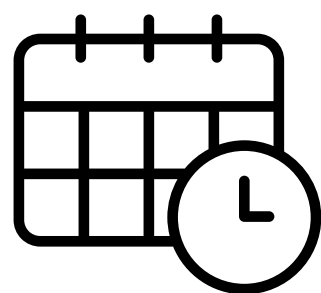
NACES 2023

NACES 2023

NATIONAL CHEMICAL ENGINEERING SYMPOSIUM 2023

RULES & REGULATION

TECHNICAL CASE STUDY & PRESENTATION



16 - 17 December 2023



**Universiti Malaya (UM),
Kuala Lumpur**

THEME

Mainstreaming Lab-grown Food: Chemical Engineers to the rescue!

Population growth, land scarcity, climate change, and food security are all interrelated global issues that are placing great strain on the planet. By 2050, there will be 9.7 billion people on the planet, and the need for food is anticipated to rise. However, with approximately 40% of the land on the planet being used for agriculture, we are already facing a land shortage. Extreme weather events and shifting weather patterns are making the problem worse and reducing crop yields and food production. Food security as a result is becoming harder to maintain, especially in developing nations. We must come up with sustainable methods that boost food production while reducing their negative effects on the environment to address these issues. Sustainable agricultural methods, reducing food waste, promoting plant-based diets, and the development of technology like lab-grown food might all be part of the solutions.

Chemical engineers are essential to the advancement and acceptance of food produced in laboratories. They are well positioned to address the technical difficulties of scaling up cell-based meat production since they are experts in the design and optimisation of chemical processes. This theme will explore the interdisciplinary nature of lab-grown food production, highlighting the critical role that chemical engineers play in developing and optimising the various stages of the process, from cell cultivation to final product formulation. It will also look into the difficulties the industry is currently facing, such as the need to create sustainable, cost-efficient production methods that fulfil high requirements for food safety and quality. The theme will emphasise the most recent advancements in food production from lab-grown sources and their possible effects on the environment and the food sector. Overall, the theme will give participants a forum to interact and debate how chemical engineering may help develop a future food system that is sustainable.

OBJECTIVES

1

To enhance understanding and generate awareness on incorporating contemporary technology into manufacturing processes and optimizing operational efficiency.

2

To enhance and develop critical and multi-dimensional logical thinking skills

3

To foster the development of problem-solving abilities and the practical application of engineering knowledge

COMPETITION DESCRIPTION

- It is a **GROUP** competition.
- This competition will be conducted **PHYSICALLY**.
- Each group will be assigned a task to prepare a presentation according to the issues that will be provided during the participant briefing session on **21 October 2023**.
- Participants are required to devise innovative solution(s) to address the issues given based on their own creativity, taking into account the environmental impact and economic value.
- Each participating team should showcase teamwork, research skills, critical thinking, as well as creativity in this competition.
- On the day of the presentation, the teams will present their works, which will be judged accordingly. A Q&A session follows afterward.

ELIGIBILITY

1

Participants must be **full-time undergraduate students** enrolled in the **Chemical Engineering Program** (or equivalent) offered by one of the participating universities/ institutions.

2

Participants must submit an **APPROVED** original copy of their **student identity card (Matric Card)** together with the **LATEST module registration** file.

3

Each participant is only allowed to participate in **ONE (1) physical mode competition** and **ALL online mode competitions** are allowed to participate.

4

Each participant in a team must be from the **SAME** university/institution.

FORMAT //

- Dress code: **Formal/ Smart Casual**
- The competition is carried out in **English**.
- A team should consist of **THREE (3)** members per group only.
- Each team must submit a presentation slide in **pptx**.
- Each team will be given **5 MINUTES** for technical set up, **15 MINUTES** for presentation of their case study and followed by a **10-MINUTES** Q&A session with the judges, where the judges can ask questions or provide comments. Teams exceeding the time limit may be imposed with mark deduction.
- Every participant is **compulsory to present**.
- All presentation slides must be created in **Microsoft Office PowerPoint**, with a maximum limit of **20 SLIDES**.

// RULES & REGULATION

- Each campus is entitled to send a maximum of **THREE (3)** teams. Each team must consist of **THREE (3)** members only.
- The presentation will be done **PHYSICALLY** at the Universiti Malaya.
- Each participant is required to present their solutions.
- The presentation should not have appeared in any publications other than in school publications. (Participants need to ensure that they have acquired permission to use any resources having the copyright).
- Entries that do not comply with any one of the above rules will be **AUTOMATICALLY DISQUALIFIED**.
- Upon the submission, any modification on the contents is not allowed. Evaluators have the right to penalise the participating team for the change of contents.

SUBMISSION GUIDELINE

PowerPoint Slides Submission

1 Submission deadline: **2 December 2023 11:59 pm**

2 Submissions can only be made one week before the submission deadline (**25 November 2023 12:00 am- 2 December 2023 11:59 pm**).

3 Participants will have a deadline of **ONE (1) months** to finish the task and submit their PowerPoint slides via email.

4 Email: admin_jkk.event@um.edu.my

5 Email Subject:
[TCS&P]_University Name_Team Name
• Example: [TCS&P]_UM_Team1

SUBMISSION GUIDELINE

6

All successful receipt of submissions will be notified via the provided email within 3 working days. If the participants do not receive any reply from us, please do not hesitate to contact the organizer.

SCORING

1

Content [60%]

- **Definition of the term.**
- **Problem statement - Address the issue(s).**
- **Suggest solution(s).**
- **Challenges**
- **Conclusion.**
- **Recommendation.**

- **Participants are required to do research and give practical solution(s) based on the given issues in the case study.**

- **The way(s) to solve the issues are based on their own creativity while considering the environmental effect and economic worth.**

SCORING

2

Presentation skills [15%]

- **Voice projection.**
- **Eye contact with the audience.**
- **Attractiveness of the slide presentation.**
- **Context of presentation is very clear and**
- **Justified with reference.**
- **Able to meet the set time frame.**

3

Question-and-Answer session [25%]

- **Justifications are made to every argument made by the judges.**
 - **The justification must be supported with the fundamental knowledge of chemical engineering**
- **Effectiveness of the team and teamwork.**

RESULT

The winners of the competition will be announced during the NACES 2023 Closing Ceremony on 17 December 2023.

PRIZES

TECHNICAL CASE STUDY & PRESENTATION



RM 700



RM 500



RM 300

Top three winning teams will receive trophies and cash prizes.

All entries will be given a certificate of participation.

IMPORTANT NOTES

Each participant must agree to be bound by the official contest rules. The organizer has all the rights to eliminate or disqualify any participants that violate the guidelines as stated above. Such actions may be taken by the host without any prior notice.

The judges' decisions are final and any appeals to the decisions will not be entertained.

Participants must complete the registration form by **18 October 2023 11: 59 pm to be eligible for participation.**

Any changes on the confirmed participants' list must be informed before **20 October 2023 11:59 pm.**

IMPORTANT NOTES

Organiser will hold the right to publish submitted presentations for future publications without prior notice to the participants. Kindly notify the organiser if you have a patent or copyright reserved.

Registration fees are non-refundable.

The contents of this booklet are subjected to amendment and improvisation. Participants will be notified when the amendments are made.

CONTACT INFORMATION



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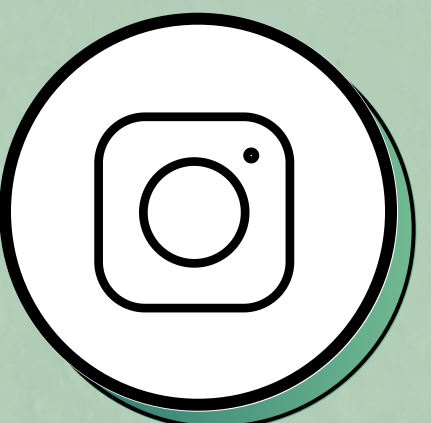
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<https://umevent.um.edu.my/NACES2023>



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