



UNIVERSITI  
MALAYA

IChemE

ADVANCING  
CHEMICAL  
ENGINEERING  
WORLDWIDE



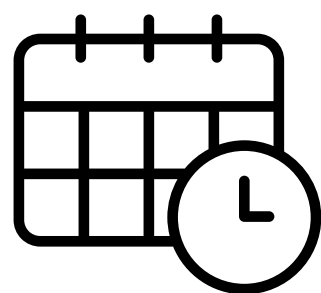
**NACES 2023**

# NACES 2023

NATIONAL CHEMICAL ENGINEERING SYMPOSIUM 2023

## RULES & REGULATION

TECHNICAL ESSAY COMPETITION



**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 explore the potential of lab-grown food and discuss the challenges and opportunities in mainstreaming the lab-grown food technology.**

**2**

**To equip the future engineers with fundamental knowledge, innovative ideas and critical thinking abilities.**

**3**

**To provide a platform for participants to enhance their technical writing skills and research skills.**

# COMPETITION DESCRIPTION

- This is an **INDIVIDUAL** competition.
- This competition will be conducted via **ONLINE**.
- Participants in this competition must create an essay that demonstrates the topic relating to the competition's theme, which will be announced during the participant briefing session on **21 October 2023**.
- The essay should contain critical analysis of the topic and be equipped with relevant details.
- The participants should think critically and consistently on the topic given by providing evidence and reason to support their opinions.

# 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 (Matriks 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.

# FORMAT

1

## Essay Guidelines

- **Language: English**
- **Length: Between 700 and 1000 words (Excluding abstract and references)**
- **Abstract: Not more than 250 words.**
- **Specific essay title, name, IC number, contact number and email address of participants should be included in the cover page of the participating entry.**
- **Cover page templates will be provided during the briefing session held on 21 October 2023.**
- **Essay must consist of :**
  1. **Specific essay title**
  2. **Abstract**
  3. **Significance of finding**
  4. **Content**
  5. **Conclusion**
  6. **References**
  7. **Appendix**

# FORMAT //

2

## Essay Format

**All submission must follow the following format:**

- **Font type: Times New Roman**
- **Font size: 12**
- **Spacing: 1.5**
- **Page layout: Standard A4 Size (21.0 x 29.7 cm)**
- **Margin: (Left to Right: 2.54cm) and (Top to Bottom: 2.54 cm)**
- **Title of the essay should be typed in capital case (bold 14pt) and centred on the page.**
- **The text must be justified, and paragraphs are separated by 10 pt with indentation of 12mm from left.**
- **References should appear in references list at the end of essay and should follow APA referencing style format.**
- **Page numbers should be included.**



# RULES & REGULATION

- Each campus is entitled to send a maximum of **FIVE (5)** participants.
- Each participant is entitled for **ONE (1)** submission only.
- The videos must be of original work. Plagiarism is **STRICTLY PROHIBITED**.
- Political and '3R'- Race, Religion and Royalty contents are **NOT ALLOWED**.
- The essay should be original, well-researched and all sources should be acknowledged. List of references should be attached at the end of the essay.
- Entries which do not comply with any of the rules and essay guidelines stated will be **DISQUALIFIED AUTOMATICALLY**.
- Upon the essay submission, any modification on the essay contents is not allowed. Evaluators have the right to penalise the participating team for the change of contents.

# SUBMISSION GUIDELINE

1

**Submission deadline: 23 November 2023 11:59 pm**

2

**Submissions can only be made one week before the submission deadline (18 November 2023 12:00 am- 23 November 2023 11:59pm).**

3

**Submission must be done via email**

**i. Email: admin\_jkk.event@um.edu.my**

**ii. Email subject:**

**[TEC]\_Name of University/Institution\_Full Name**

**Example: [TEC]\_Universiti Malaya\_Alice**

4

**Any submission that fails to follow the guidelines will not be entertained.**

5

**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 organiser.**

# SCORING

## 1 Content [60%]

- Degree of Originality, Novelty and Critical Analysis
- Comprehensive information on lab-grown food
- Economic

## 2 Format [20%]

- Please refer to the format of essay

## 3 Language [20%]

- Grammar, sentence structure and choice of words

# RESULT

**The winners of the competition will be informed one week earlier to attend the NACES 2023 Closing Ceremony on 17 December 2023 for a prize giving session.**

# PRIZES

## TECHNICAL ESSAY



**RM 150**



**RM 120**



**RM 100**

**Top three winners 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 essays 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



**PIC:**

**+60 11-1057 8069 (Chua Wei Ting)**

**PIC:**

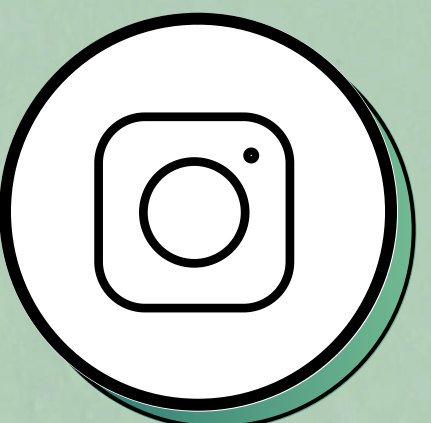
**+60 17-664 3522 (Vinn)**



**[admin\\_jkk.event@um.edu.my](mailto:admin_jkk.event@um.edu.my)**



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



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