

GENERAL GUIDEBOOK



Chemical Engineering Research Competition (CERCo)

Held by :
Chemical Engineering Departement
Diponegoro University



PRAYA DJIWANGKORO ADJI MUNANDAR
Project Manager Creation 2023

First of all Let's say thank God for His blessings for this event and competition, and also for all the people who were involved in the preparation of this event and competition.

Chemical Engineering Fair and Competition (CREATION) is the largest annual event organized by Chemical Engineering Students Association in Diponegoro University, in collaboration with Badan Koordinasi Kegiatan Mahasiswa Teknik Kimia Indonesia (BKKMTKI), Society of Petroleum Engineers Diponegoro University Student Chapter, Society of Renewable Energy Diponegoro University, Ikatan Alumni Teknik Kimia (IKATEKA) UNDIP, Ikatan Mahasiswa Studi Offshore Indonesia and Chemical Engineering Department of Diponegoro University.

Based on the Tri Dharma of Higher Education, namely education and teaching, research, and community service, research development is seen as very important to advance the quality of education and science in Indonesia and Southeast Asia. Based on this fact, a program is needed to improve the quality of research in Southeast Asia so that it can generate research products that are innovative and beneficial for the people of Southeast Asia. Seeing this reality, the Chemical Engineering Student Association of Diponegoro University, under the shade of Department of Chemical Engineering, Faculty of Engineering, Diponegoro University, organized a research competition for chemical engineering students throughout Southeast Asia. Creation 2023 is expected to spur the development of research by students, especially in the field of chemical engineering.

The theme of CREATION 2023, Ignite the Energy Transition to Achieve Sustainability Goals, encourages you to provide an innovation related to the efficiency and effectiveness of sustainable use of resources to be able to align industrial development with the preservation of environmental functions that can provide benefits to the community and sharpen your critical thinking skills and analysis as a problem solver and a young innovator of the Indonesian generation to support the realization of the 2030 Sustainable Development Goals (SDGs). Therefore, we need you with different backgrounds to innovate with us.

We look forward to seeing you participate in CREATION 2023 and we wish you the best of luck!

About _____ **CREATION**

Initiated in 2007, CREATION (Chemical Engineering Fair and Competition) stands as the premier annual event organized by the Chemical Engineering Student Association of Diponegoro University, focusing on Research and Technology. Aligned with the Tri Dharma of Higher Education, our primary objective is to foster a vibrant research environment not only within Indonesia but also across Southeast Asia. We endeavor to achieve the following goals: Firstly, we strive to offer an innovative platform for research competition. Secondly, we provide valuable insights through expert-led seminars. Thirdly, we aim to stimulate critical thinking among students to address prevailing energy challenges. Lastly, we aim to facilitate the integration of millennial-generated innovations into the future development of the green industry.

OUR _____ **LOGO & THEME**

Our Logo



Our Theme

**Ignite the Energy
Transition To Achieve
Sustainability Goals**

OUR **TAGLINE**

ACCELERATE TO TRANSITION

CERCo

Chemical Engineering Research Competition

Chemical Engineering Research Competition (CERCo) is a global research competition that **focuses on prototypes and is open to active undergraduate students pursuing D3, D4, or S1 degrees**. The main objective of CERCo is to inspire participants to come up with innovative solutions to various problems, particularly those related to achieving a sustainable Green Industry. The competition emphasizes the use of chemical science, chemical engineering, and advanced technology, with a strong emphasis on innovation, creativity, practicality, and economic viability.

Date & Time

Venue : Chemical Engineering Department, Diponegoro University

Date : 18 November 2023

Time : To Be Announced

CERCo 2023 will be held online and offline (Final Presentation)



Competition

THEMES & SUBTHEMES

THEMES

"Utilizing Transition Energy Through Youth Innovation as A Pathway To Accomplishing Net Zero Emission"

SUBTHEMES

Waste Treatment

Waste management involves the handling of waste materials from the time it is made to its disposal which proves to be very important in regulating pollution.

Advanced Material

Advanced material can be defined as any new or significantly improved material that provides a distinct advantage in (physical or functional) performance when compared to conventional materials.

Renewable Energy

Renewable energy is the energy derived from natural resources that replenish themselves in a relatively short period of time without depleting the Earth's resources for example solar, wind, hydropower, and geothermal which proves to be abundant, virtually inexhaustible, easily found everywhere, and the most important thing is, barely causes environmental damage.

Bio Resourcement

Bio resourcement are natural renewable sources like organic wastes and naturally formed or formable raw materials from human and animal activities.

TERMS and CONDITION

—— PARTICIPANT REQUIREMENTS ——

- Participants **must be registered as an active student** diploma or S-1 in University.
- Participant is **still a student at the time of competition**, proven by attachment of University Student Identification Card copy.
- Participant should be in a form of **a group consists of three (3) people in each group**. Members of the group must come from the same institution or university, and may come from different departments.
- **Each team is accompanied by one academic consultant** from the same educational institution by attaching the biodata of the academic consultant.
- Participants who **registered should not be replaced with other participants** from the abstract elimination stage to the last stage.



TERMS and CONDITION

COMPETITION REQUIREMENTS

- Each team is only allowed to submit **one research paper**.
- All submitted research papers **must be the result of personal effort**.
- All research papers **must already comply with this year's theme and subthemes** that have been determined and must be written entirely in English.
- All submitted work is an **original work** with the following conditions:
 - Has never been submitted to another competition
 - Has never been commercialized (has never been sold)
 - Has never been published in a professional journal
- Each stage and condition of abstract must comply to all the provisions contained within the CREATION 2023 Guidebook.
- **Any violations and plagiarism will be subjected for punishment** in the form of disqualification from the participation of the competition.
- Participants are required to **follow the instagram account of CREATION 2023, download the twibbon on <http://creation.undip.ac.id/> and upload it on instagram** as well as tag @creationundip according to the terms on the template. Therefore, mentioned requirements must be proven by screenshots.
- All-registration and submission of files can be done through this link <http://creation.undip.ac.id/>

Abstract ———

GUIDELINES

- 1** Abstract paper size must be **A4** and **typed in Times New Roman** with the left margin 4 cm, right 3 cm, top 3 cm, and bottom 3 cm.
- 2** Abstract **must be written in English** with the abstract title font size 14pt and the abstract body font size 12pt.
- 3** Abstract typed in single-space with a **maximum of 300 words** within one page.
- 4** Abstract contains a brief resume of the full paper which includes: background, objectives, benefits, writing methods, results, and recommended suggestions.
- 5** Keywords are typed in one space, bold, italic, with the range of 3 - 5 words.
- 6** All citations and references must be written according to **APA styles**.
- 7** Abstracts that pass the selection stage **will be announced via Creation official website** at <http://creation.undip.ac.id/> or **Creation official social media** @creationundip on instagram.

Abstract **FORMAT**

TITLE

Team leader's name¹ , 1st Member's name² , 2nd Member's name³

¹1st Major's name, University's name

²2nd Major's name, University's name

³3rd Major's name, University's name

(note: The Major's name as well as the university of the
participants written just once is enough if they come from
the same department)

Team leader's email

Abstract

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Keywords : **Aaa, bbb, cccc, ddd, eee**

TIMELINE



2 July - 25 July 2023
Registration Period

13 August 2023
Abstract Announcement

1-10 September 2023
1st Stage of Full Paper Submission

11-24 September 2023
2nd Stage of Full Paper Submission

29 October 2023
Finalist Announcement

30 October - 10 November 2023
Finalist Registration

17 November 2023
Technical Meeting

18 November 2023
CERCo Presentation

Competition **STAGES**

1st Stage

Abstract Selection

During the abstract selection process, participants are required to submit an abstract in accordance with the theme, provided subthemes, and the guidelines. The abstract will act as a precursor to the fullpaper that will be submitted during the next stage.

2nd Stage

Full Paper Selection

The fullpaper selection process requires participants to submit a completed version of their scientific report based on the abstract submitted during the previous stage. Participants must send all the documents required during this stage. The terms and mechanisms for the full paper submission will be informed later for the teams that pass the abstract selection process.

3rd Stage

Final Presentation

The international presentation acts as the grand final stage of The Chemical Engineering Research Competition (CERCo). Participants who successfully passed the fullpaper selection stage are obligated to participate in the presentation stage in which participants are required to present their research (presented in English) and display their prototype or product in the form of a video. The presentation will be held offline in the mentioned venue.

REGISTRATION

Process

Registration and Abstract Submission

- Participants are able to register and upload an abstract (file in pdf form), with the file name **Abstract_CERCo_Team's Name_University Name**
- Screenshot proof of having followed CREATION 2023's Instagram account, posting the CREATION 2023 twibbon (in jpg/jpeg or pdf form), and having shared posters and their respective captions regarding the CERCo competition to active social media groups (at least 3) via the website link. File name : **Screenshot Proof of CREATION_Team's Name_University Name**
- Scan each participant's Student Identity Card and merge into 1 pdf file. File Name: **Student Identity Card_Team's Name_University Name**

Payment

Payment for participation in CERCo is only made at the full paper collection, all participants that already passed the abstract selection stage must make payment, divided into two stage:

- **1st Stage : IDR 110.000 / \$11 USD**
- **2st Stage : IDR 130.000 / \$13 USD**

Which can be done through :

- BNI 1734731371 a.n. Fatimah Nur Zahrani

As well as e - wallets including :

- Gopay : 081387634996 (Zahra)
- Dana : 081387634996 (Fatimah Nur Zahrani)
- PayPal : @fatimahnurzahrani

PRIZE and REWARDS

First Place

Certificate + IDR 7.500.000

Second Place

Certificate + IDR 5.000.000

Third Place

Certificate + IDR 3.000.000

Best Presentation

Certificate + IDR 500.000

Best Prototype

Certificate + IDR 500.000

All Finalists of CERCo

Certificate as finalists of CERCo 2023

Contact Person

These are the IDs of the contact person
that can be contacted via Line

Yulia Khalna Ariqah - (yuliakhalnaaa)

Anantha Fatara Ghitrif - (kingara21)