

GUIDE BOOK DERRICK 2025



DERRICK
2025 Energy
Innovation
Action



PLANT DESIGN COMPETITION

In Collaboration With:



Organized By:





THEME

**Innovative and Sustainable Plant Design for
Future Energy and Chemical Transformation**

SUBTHEME

**The examples of products that relate to the theme that
can be produced are:**

- Bioenergy Product
- Polymer Product
- Other Chemical Product and derivatives



GENERAL RULES

- International Plant Design Competition 2025 (IPDC 2025) will be held online (via zoom)
- International Plant Design Competition 2025 (IPDC 2025) is open to Indonesian and International students
- Participants must form a team consisting of 3 (three) students from the same universities
- Each university is allowed to send a maximum 3 (three) teams
- Each participant can only participate in one team
- Each participant is not allowed to participate in other competitions held by DERRICK 2025
- Each team must have one mentor from the same institution as the participants. The mentor is only allowed to accompany one team.
- International Plant Design Competition 2025 (IPDC 2025) consists of 2 (two) stages: Abstract Selection and Final Stage (Full Paper Submission and Presentation Session)
- All submission files for each stage have to follow the given format
- All submission files should be written, submitted, and presented in formal English
- Fail to obey the rules, format, or late submission may receive deductions of points or even disqualification
- The maximum of paper plagiarism rate is 10% without a literature review and bibliography.
- All participants should attend a technical meeting
- The result of the competition will be announced on DERRICK 2025 Awarding Night
- All participants will have access to the final score after the Awarding Night
- Any changes of participants of the team are strictly prohibited after registration
- All registered participants have to agree to follow rules set by committee of International Plant Design Competition 2025 (IPDC 2025)

REGISTRATION RULES

Registration is conducted by the team leader through the Google Form linktree on the reaction2025_ Instagram account.

Participants must submit additional documents, including:

1. Scanned/Photographed Student ID Cards of all group members in one PDF format.
2. Screenshots of all group members' Twibbons.
3. Screenshots of proof of following the Instagram accounts @reaction2025_ and @derrick2k25_.

The Twibbon for this event can be found in the @derrickk25_ Instagram bio.

COMPETITION RULES

- International Plant Design Competition 2025 (IPDC 2025) consists of 2 (two) stages: Abstract Selection and Final Stage (Full Paper Submission and Presentation)
- Plant design proposed by the participants must be related to the given theme.
- The plant must produce at least one eco-friendly or green sustainable product that related to the use of renewable resources.
- The examples of products that relate to the theme that can be produced are:
 - A. Bioenergy Product
 - Biogasoline
 - Bioethanol
 - Biodiesel
 - Green Diesel
 - Bioavtur
 - Biogas
 - Etc.
 - B. Polymer Product
 - Polyethylene
 - Polypropylene
 - Etc.
 - C. Other Chemical Product and derivatives



COMPETITION RULES

- Each team may only send one abstract
- Plant design must have never been commercialized or won any other competitions before.
- All entries will become the property of the committee of International Plant Design Competition 2025 (IPDC 2025) and will not returned
- The top 30 selected abstracts will be allowed to proceed to the Final Stage and need to submit full paper and presentation file to the committee (according to the date specified in the timeline)
- The top 30 selected abstracts will be informed by the committee via email and DERRICK 2025 Official Account
- The top 6 selected full paper will be allowed to proceed to the presentation session then slide presentation file must be submitted to the committee (according to the date specified in the timeline)
- The top 6 selected full paper will be informed by the committee via email and DERRICK 2025 Official Account
- All decisions made by the judges and the committee of International Plant Design Competition 2025 (IPDC 2025) are absolute and undebatable.



ABSTRACT FORMAT

1. Maximum word 500 counts for the content in one paragraph (not including title, and keywords).
2. The abstract is typed in accordance with the provisions below,
 - ✓ Language : Format English
 - ✓ Font : Times New Roman
 - ✓ Font Size : 12 pt
 - ✓ Page margin : 3 cm for left, 2 cm for right, top, and bottom
 - ✓ Paper size : A4
 - ✓ Paragraph alignment : Justify
 - ✓ Line spacing : 1 line
 - ✓ File Type : pdf
3. The title is typed in bold and center alignment.
4. Under the title, type all the names of the authors with the name of the main author or the name of the group leader written first. There is no space between the title and the author's name.
5. Under the author's name, type the origin of the author's university or educational institution. There is no distance between the author's name and the origin of the institution or university
6. Under the origin of the university or educational institution, spaced 2 times enter, then write "ABSTRACT" in UPPERCASE letter, centered, and BOLD style
7. The abstract must include a maximum of five keywords at the end of the paragraph written in BOLD and italic style.
8. The abstract must be submitted according to the submission schedule set by the International Plant Design Competition 2025 (IPDC 2025) committee.

JUGGING CRITERIA FOR FIRST STAGE (ABSTRACT SELECTION)

1. **Technical assessment (format, language, neatness, adherence to the guidelines, etc): 15 points**
 2. **Content of the abstract assessment (plant background, processes of the plant, must be related to the given theme, results, impact, etc): 85 points**
- Total: 100 points**



FULL PAPER FORMAT

1. Paper size : A4
2. Font : Times New Roman
3. Font Size : 12 pt for the contents, while 14 pt for the chapter title
4. Margin : Top (2 cm), Left (3 cm), Right (2 cm), Bottom (2 cm)
5. Line Spacing : 1.5 (the bibliography uses line spacing of 1.0)
6. Align Text : Justify (except for titles using the Center)
7. The maximum of paper plagiarism rate is 10% without a literature review and bibliography.
8. The maximum limit of the number of paper pages is 150 pages (not including the Cover Page, Executive Summary, Table of Contents, Abstract, Product Description, Bibliography and Attachments)
9. The chapter and subchapter are written using a numeral system (each chapter and subchapter uses a numbering system based on the predetermined format). Format for writing the chapter and subchapter is in the attached example. (see the full paper template file)
10. Page numbering is formatted as below:
 11. Tables are given the titles that use numbering according to the order in the text. Table titles are typed above the table with table numbers using Arabic numbers (1,2,3,...) and bold font type (bold). (see the full paper template file)
 12. Figures (both graphics and photos) are given a title with numbering the figure in the order of the text. The title of the image is typed below the figure with the number of figures using Arabic numbers (1,2,3,...). (see the full paper template file)
13. If the paper contains citations, reference sources must be included (APA style)
14. If the paper does not meet the format specified in this competition, the point will be deducted according to the type of violation.
15. The full paper must be submitted according to the submission schedule set by the International Plant Design Competition 2025 (IPDC 2024) committee.
16. Full paper must be submitted in PDF format before 4 November 2025 23.59 WIB (GMT+7) (for Batch 1) and 21 November 2025 23.59 WIB (GMT+7) (for Batch 2) to (email: pdcreaction.derrick25@gmail.com) with the file name and email subject: IPDC_2025_FULLPAPER_Team Name.
17. P&ID (Piping and Instrumentation Diagram) / PFD (Process Flow Diagram) also submitted abstractly but in different file in PDF format.



JUGGING CRITERIA FOR FINAL STAGE
(FULL PAPER SUBMISSION & PRESENTATION SESSION) FULL PAPER

- 1.Plant Design Basis (Background, Site selection, Feedstock, Product, Mass and Heat balance): 11 points
2. Process Selection (Methodology, Analysis): 9 points
- 2.Process Design (Evaluation basis and method, Process description and analysis, Operation unit design philosophy): 22 points
- 3.Equipment Specification (List of equipment, Material selection and specification): 14 points
- 4.Plant Support System and Unit (Plant utility systems, waste management, Plant safety and protection systems, Plant layout): 24 points
- 5.Plant Support System and Unit (Plant utility systems, waste management, Plant safety and protection systems, Plant layout): 24 points
- 6.Economic Investment and Calculations (Economic analysis methodology, Capital cost estimation, Manufacturing cost estimation, Profitability analysis, Sensitivity analysis): 14 points
- 7.Final (format, language, neatness, adherence to the guidelines, etc): 6 points Total: 100 points

PRESENTATION SESSION
(15 MINUTES FOR PRESENTING & 15 MINUTES FOR QNA)

- 1.Slide presentation (material of plant design, creativity, and etc) : 30
- 2.Presenting session (delivery, communication, question and answer, etc) : 70 Total: 100 points

TIMELINE

No	Event	Date
1	Open Registration and abstract submitted	9 – 23 October 2025
2	Announcement of 30 selected abstracts	24 October 2025
3	Collection of Full Paper Batch 1	25 October – 8 November 2025
4	Collection of Full Paper Batch 2	9 – 23 November 2025
5	Finalist Announcement	28 November 2025
6	Technical Meeting	30 November 2025
7	Collection of PPT	3 Desember 2025
8	Competition Day	5 Desember 2025
9	Awarding	6 Desember 2025



PAYMENT INFORMATION

- 1.Free abstract per team
- 2.For Indonesia:

Batch	Registration Period	Cost
1	25 October – 8 November 2025	IDR 150.000 per team
2	9 November– 23 November 2025	IDR 200.000 per team

- 3.For International:

Batch	Registration Period	Cost
1	25 October – 8 November 2025	USD 9 /team
2	9 November– 23 November 2025	USD 12 /team

4.For domestic delegates, please refer to the IDR registration fees. Please kindly send the payment to one of these accounts:

- BNI Bank : 1408613699 (a.n Muhammad Rehan)
- BRI Bank : 010701135855500 (a.n Naila Adinda)

5. For international delegates, please refer to the USD registration fees. Please kindly send the payment to our PayPal account:

- TitiasiAsidimetri27 (a.n Ahmed Kardofi)

6. Confirm payment within 1x24 hours to the number below by sending proof of transfer:

- Contact Person:
- Salsa : +6281374172446



ACTIVITY OF IPDC

1. Registration and Abstract Submission (Free abstract)
 - 9 October – 23 October 2025
2. Top 30 abstract selected announcement 24 October 2025
3. Full Paper Submission & Payment
 - Batch 1 : 25 October – 8 November 2025 (Rp150.000 for domestic or \$ 9 for international per team)
 - Batch 2 : 9 – 23 November 2025 (Rp200.000 for domestic or \$ 12 for international per team)
4. Finalist Announcement 28 November 2025
5. Technical Meeting 30 November 2025
6. Slides Presentation Submission (Send to Gmail pdcreaction.derrick25@gmail.com) 3 Desember 2025 22.00 WIB (GMT+7)
7. Competition Day 5 Desember 2025 08.00 WIB (GMT+7)
8. Awarding Night 6 Desember 2025
9. Any remaining question, please ask via email to the contact person below:
Salsa : +6281374172446

PRIZES AND AWARDS

The winners of Paper and Poster Competition (PPC) Derrick 2025 will be awarded money and a certificate:

<i>1st winner</i>	Rp 2.000.000	+	E-certificate
<i>2nd winner</i>	Rp 1.500.000	+	E-certificate
<i>3rd winner</i>	Rp 1.000.000	+	E-certificate



INFORMATION SERVICES

More information contact :

i. Contact Person:

Fadhil Ihsanudin : +6285142663659

Ahmed Kardofi : +6281219349778

ii. Social media

a. Email: pdcreaction.derrick25@gmail.com

b. Instagram : @derrick2k25_ and @reaction2025_

iii. Address

Polytechnic of Energy and Mineral Akamigas Cepu – Gajah Mada street 38 Cepu, Blora,
Central Java 58315

