

# MECHANICAL ENGINEERING SCIENTIFIC COMPETITION

FAITH INTERNATIONAL COMPETITION 2021



# TIMELINE

## **ONLINE REGISTRATION**

May 17 – August 7, 2021

## **ONLINE SUBMISSION**

June 10 – August 7, 2021

## **INSTAGRAM CHALLENGE**

August 9 – 14, 2021

## **JUDGEMENT PERIOD**

August 9 – 14, 2021

## **ANNOUNCEMENT OF WINNERS**

August 16, 2021

# PRIZE

For each competition, participants will get a prize as listed below.



Rp 6.000.000,-  
(for approximately USD 420 \*\*)



Rp 4.300.000,-  
(for approximately USD 301 \*\*)



Rp 2.700.000,-  
(for approximately USD 189 \*\*)



Rp 1.000.000,-  
(for approximately USD 70 \*\*)

\*\* Exchange Rate used: 1 USD = 14,275.90 IDR



# TECHNICAL



Start by reading what is expected from you in this competition.  
(Refer to **MOTIVATION AND GUIDELINES**)



Design your product (using **3D-CAD** design softwares).



Write your report.



Upload your 3D-Design file, report, and poster to Google Drive  
and compile them into **one folder**.



Set the folder so that **ANYONE WITH THE LINK** can access it.



Submit your Google Drive link at [faith.petra.ac.id](http://faith.petra.ac.id). Follow the  
instructions at the website.



Wait for further instructions from the *FAITH INTERNATIONAL  
COMPETITION 2021* committee.





# MOTIVATION AND GUIDELINES

1. The competition's challenge is to design a product which could optimize the implementation of COVID-19 health protocol or increase productivity during COVID-19 pandemic.
2. The target is clear: Create a product that will optimize the implementation of COVID-19 health protocol OR increase productivity during COVID-19 pandemic.
3. The expected product can be an improvement from existing products, but it would be preferable if the product is original and has never been known before.
4. Perspective of your design is important because it gives better perspective to the judges to see the originality, detail, and concept of your design.
5. Poster tells a story about your design concept, so its presentation affects the judges decision. You must try to make your poster so that it can be understood not only by the judges but ultimately also to many non-engineering individuals.
6. Try to add some complexity into the product to gain extra attention from the judges.
7. Place yourself as a designer and engineer at the same time, while clearing your personal vision. Use your personal experience to identify what people or healthcare needs nowadays, especially during COVID-19 pandemic.
8. Remember that there is also a winning category that challenges participants to get likes from Instagram posts of their poster. Therefore, make sure that your poster can pique viewer's interest. Refer to **INSTAGRAM CHALLENGE**.



# REPORT REQUIREMENT

1. Report must be uploaded with file type : **PDF**
2. Report must contain **at least** :
  - a. Title
  - b. Purpose and Function of the product
  - c. Working Principles
  - d. Product Properties (Estimated size, weight, or materials used)
  - e. Explanation on how to use the product
  - f. Pictures of the product
3. Report must also include in-text citations when referring to a source. All references and in-text citations must be done in **APA** format.
4. Report Document Formatting:
  - a. Font : Times New Roman
  - b. Fontsize : 12 (Body)
  - c. Margins : 2.54 cm (All)
  - d. Spacing : 1.15
  - e. Size : A4

# DESIGN FILE REQUIREMENTS

## 1. Design Criteria :

- a. Must be a 3D (Three dimensional) design of the product.
- b. Uploaded file must be assembly.
- c. Set the material or the surface color of the Design as in the Report.
- d. All parts of the product must be shown clearly in the design. (i.e., nuts, bolts)

2. The Design File uploaded must be within file type : **.step, .igs, PARASOLID, or .pdf.**



# POSTER REQUIREMENT



Poster must be uploaded with file type : **PNG** (High resolution)



Poster size is A3 with no crop marks or transparent pixels.  
Maximum file size is 10MB.



Poster must contain **at least** :

- Title
- Function of the product
- Summary of the how the product works
- Charts and/or pictures



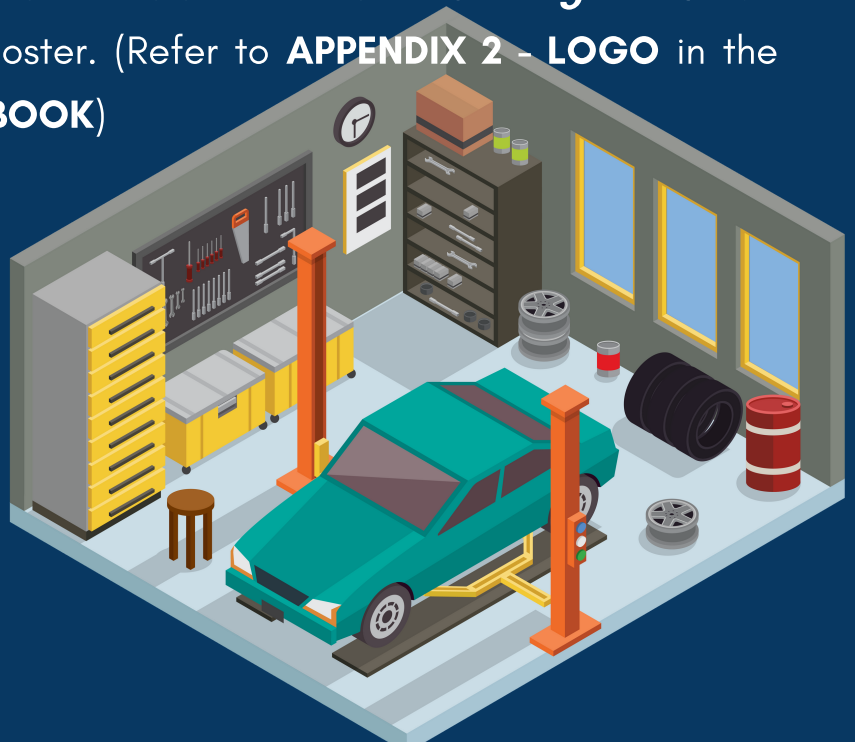
Poster must contain no more than 300 words, excluding the participants' names and the title of the poster.



The only personal information that is allowed to be presented in the poster is the name or the nickname of the designer.



***FAITH INTERNATIONAL COMPETITION 2021 logo*** must be included in the poster. (Refer to **APPENDIX 2 - LOGO** in the **MASTER GUIDE BOOK**)



# EVALUATIONS CRITERIA AND SCORING

## 1. Report and Overall Product Idea - 35%

- a. Purpose and Function of The Product - 10%
  - i. Correlation between the product and the competition topic.
  - ii. The functionality of the product.
  - iii. The impact which will be made by the product.
  - iv. The originality of the product.
- b. Working Principles - 10%
  - i. Basic theory explanation (physics, etc.).
- c. Product specifications - 5%
  - i. Realistic
  - ii. Good Selling Potential.
  - iii. Revolutionary.
- d. Explanation on How to Use The Product - 10%
  - i. Clear Explanation
  - ii. Easy to Understand.

## 2. 3D - Design - 35%

- a. Overall Design - 15%
  - i. Shown as Assembly.
  - ii. Portrays the product correctly.
  - iii. No design errors / blunders.
- b. Detail Attention - 20%
  - i. Material set as in report.
  - ii. Complexity of the design.

## 3. Poster - 30%

- a. Explanation - 15%
  - i. Poster gives clear explanations on the design and points out the "new" innovation in the design.
  - ii. Contents can be understood by non-engineering individuals.
- b. Poster Design - 15%
  - i. Easy to read
  - ii. Creative and modern styling

# INSTAGRAM CHALLENGE

1. Choose **one** of your team members to be the person to upload an instagram feed.
2. The instagram post will contain **only the poster** made by your team.
3. The upload period is 9 August 2021 – 13 August 2021.
4. Any uploads done past the upload period will not be considered for judging
5. The challenge is to gather the most Likes in your post. This challenge will end on **14 August 2021**.
6. The caption of the post must follow this format :  
[FAITH INTERNATIONAL COMPETITION 2021]
  - TEAM ##
    - Member Name
    - Member Name
    - Member Name
7. The winner will be announced together on 16 August 2021.
8. Make sure to set your Instagram account to Public to allow FAITH International Competition 2021 committee members to check this challenge's posts.

