

MAE40 3D Printing Design Competition 2021

Design Theme: Book Stand for MAE40 commemorative book

The School of Mechanical and Aerospace Engineering (MAE) is celebrating 40 years of commencement in 2021. To celebrate this significant milestone of MAE40, we are now seeking a 3D design for a **book stand** meant to showcase the historical and engineering excellence of MAE.

Deadline of submission: **15 Nov 2021**.

Rules:

1. The design **must be 3D printable**. Multi-colour designs are allowed.
2. The final object should not measure more than **20x20x20 centimetres volume**.
3. The final object should be functional as is when it is being printed. It should not require any additional electronics or non 3D printed parts.
4. Multiple parts are allowed for the design. Assembly instruction must be given clearly if the design contains multiple parts.
5. Each submission package will contain the following items:

- The CAD drawing file of the 3D design (in DWG, IGS, or STEP)
- Exported STL file(s) of the 3D design with no error and ready for printing.
- Provide one clear rendered image of your design (max file size 10 MB).
- A description of your design in less than 250 words. In this write up, you may include images that strengthen your submission (e.g screenshots, illustrations, drawings)
- Please ensure that the digital design files are non-identifiable by names or watermarks for judging purpose.
- A pre-recorded video presentation on your design is optional.
- Signed Registration Form.

6. The submission package should be submitted to Ms Aminah via email (Email : maminah@ntu.edu.sg) by 15 NOV 2021.
7. Please name your submission email with email header: "MAE40 design competition, <your name>"
8. You may send the files through attachment in email, OR send us the shared link to NTU onedrive or google drive, OR send through WeTransfer.

Additional information for reference:

- The dimension of the MAE40 commemorative book is approximately 25 cm x 25 cm X 3cm.

- The winning entry will be printed using HP Multi Jet Fusion technology (MJF). A brief design guide of MJF is attached in this email for reference.

Terms and Conditions:

Eligibility

- This competition is open to all students or alumni of MAE/MPE only.
- There is no limit to the number of submissions from each participant. You may also form a team to participate in this competition. However, only one prize will be awarded to each participant/ team.

Judging Criteria

- We will be looking at the most inspiring and most well-designed book stand to commemorate MAE40, taking advantage of 3D printing technology.
- It should be a useable book stand should anyone wish to use it.
- Panel of judges include experts in 3D printing, engineering, and design.
- The judging criteria are Degree of Innovation, Functionality, MAE40 Emotional content and Aesthetics

Prize

- Top prize: Cash award S\$2,000.
- Runner up prize: Cash award S\$1,000.
- Winner will be contacted via email or phone by 01 DEC 2021.

Fine Print

- All entries must be participants' original work.
- MAE reserves the right to amend these rules at any time. Any amendment to competition rules will be announced.
- The decision of the judges will be final.
- The organizer holds the right to amend or modify the winning design.
- The organizer also owns the right to the digital design file and the printed parts using the design files.
- This competition is organized by MAE, supported by HP-NTU Digital Manufacturing Corp Lab.