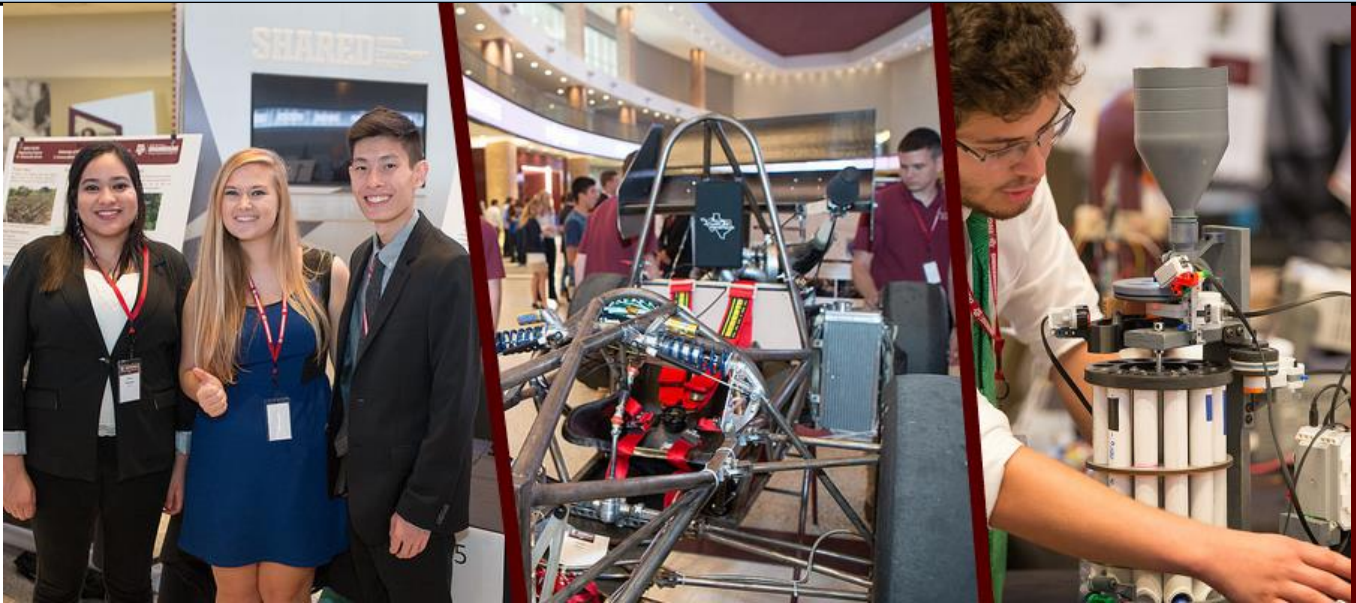


April 27, 2018

# Engineering Project Showcase Student Guidebook



**ENGINEERING**  
TEXAS A&M UNIVERSITY

**Welcome to the 2018 Engineering Project Showcase!**

The event is designed to showcase more than 200 student team projects to industry and the public. The projects will represent the work of more than 1,000 engineering students representing all majors and classifications (from freshman to seniors). All capstone senior design teams and AggieE\_Challenge teams are invited to participate along with design competition teams and students working on team projects as part of a class. We expect 150 industry judges to help us award more than \$10K in prizes!

This guidebook is designed to provide support to students for registering their teams and uploading their posters. To register your team, please visit the [Registration Portal](https://eps.secure-platform.com). (<https://eps.secure-platform.com>). For questions, please contact [inp@tamu.edu](mailto:inp@tamu.edu).

**A. Background Information**

The Engineering Project Showcase was launched in 2013 and participant numbers have doubled since it first began.

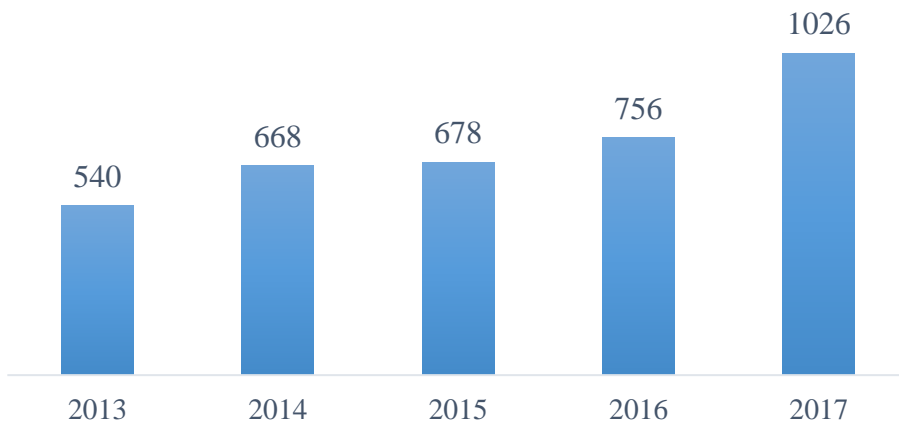


Figure 1: Number of students represented in projects

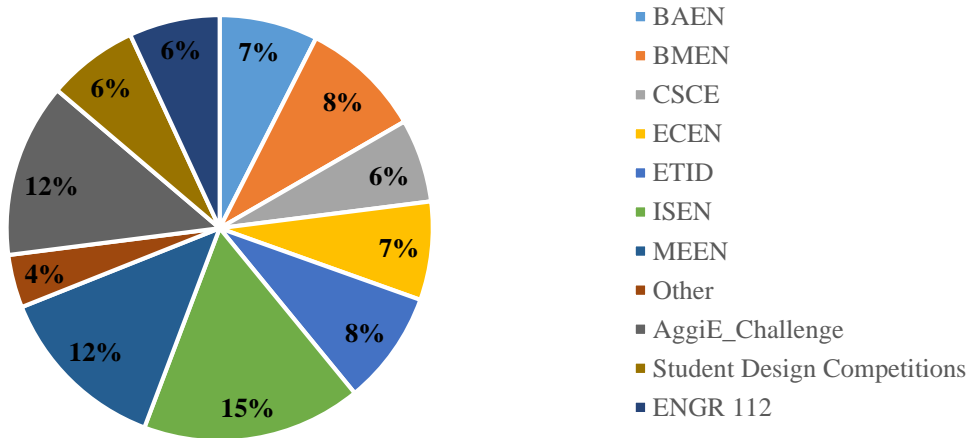


Figure 2. Project categories in the 2017 Engineering Project Showcase.

Additionally, 100+ judges from over 70 companies participated in last year’s showcase.

*Table 1- Sample of companies who participated with judges at the 2017 Engineering Project Showcase.*

3D Farming Inc.	Invocon Inc.
Alliance LLC	JNM Technologies Inc.
American Airlines	Keysight Technologies
AT&T	KIPP Sunnyside
Autodesk	L3 Technologies
Baker Hughes	LCRA
Baylor Scott & White Health	Lockheed Martin
Black & Veatch	Los Alamos National Laboratory
BlueChasm	Maxim (Integrated) Ventures
Boeing	MSC Software
Bray International	National Oilwell Varco
Bryan Research & Engineering Inc.	NOBKLE ASSOCIATES INC
Cameron - A Schlumberger Company	Noble Associates Inc.
Capital One	OneSubsea
Central Texas Veterans Health Care System	Peak Nanosystems
City of College Station	Pentair
CivilTech Engineering Inc.	Precision Drilling
Daniel MC/Emerson	PrimmTech Corp
Dell-EMC	Quest Medical Inc
Delta Structural Technology	Sandia Laboratories
Emerson Flow Systems and Solutions	Schlumberger Oilfield Services
ExxonMobil	Shell
Farmers Electric Cooperative	Siemens ITS
FlexRadio Systems	South Texas Project Nuclear Operating Company
Fluor Enterprises Inc.	ST Genetics
FrogSlayer	Stress Engineering Services
Goodman Manufacturing	T STAR LLC Texas Space Technology Applications and Research
Halliburton	TATA Consultancy Services
Hollinden   marketers + strategists	TechnipFMC
HTC/HARC	Tenaris
IBM	U. S. Steel
Ideallion Inc.	Universal Pressure Pumping Inc.
Ingersoll Rand	USAA
Integrity Integration Resources	Velentium LLC
International Cooling Tower	Weatherford

## **B. Eligibility, Important Dates, Categories & Awards**

All engineering teams working on technical projects are eligible to participate.

### **Important Dates**

- February 1- 26, 2018 – Team registration (by 11:59 pm)
- April 26, 2018 – Deadline to upload poster (by 8:00 am)
- April 27, 2018 – Engineering Project Showcase

### **Categories & Awards**

Students may participate in one of two categories:

- Capstone Design Projects
- Non-Capstone Projects

The following awards will be given to the best project in each category and the following subcategories:

- Capstone Design Awards
  - Overall Capstone Design Awards
    - 1st Prize - \$1,000
    - 2nd Prize - \$750
    - 3rd Prize - \$500
  - Recognition for Best Capstone Design Team within Major (for departments with ten or more participating projects).
- Non-Capstone Projects
  - Overall Non-Capstone Awards
    - 1st Prize - \$1,000
    - 2nd Prize - \$750
    - 3rd Prize - \$500
  - Recognition for Best Non-Capstone Team within Subcategories (for subcategories with ten or more teams).

Awards are processed as scholarships and will appear in your student account within 2 weeks of the award date. Please note: if there is a balance in your student account your award will go towards your balance.

## **C. Judging Criteria**

Each submission will be judged by at least three judges and the winning teams will be identified based on total scores for four areas shown below.

- Problem definition (25%)
- Design methodology (25%)
- Achieved or expected outcomes (25%)
- Quality of poster presentation (25%).

Tables 2 and 3 below provide the detailed rubrics for the Capstone Design and Non-Capstone Categories.

Table 2. Judging Rubric for Capstone Design Projects.

2018 Engineering Project Showcase - Judging Rubric for <b>Capstone Design Projects</b>							
All Questions Are Graded on a Scale of 1 - 5							
			Not Satisfactory (1)	Satisfactory (2)	Good (3)	Very Good (4)	Exemplary (5)
Engineering Design Presentation	Problem Definition	Customer need, design requirements, and impact are defined and a project synopsis that informs the audience is presented	1	2	3	4	5
		Demonstrates understanding of the limitations of existing solutions or lack of solutions	1	2	3	4	5
	Design and Methodology	Demonstrates a well-defined approach in developing an acceptable design solution	1	2	3	4	5
		The proposed design solution contains sufficient technical depth	1	2	3	4	5
	Outcomes	The developed prototype (hardware/software) or analytical model are of high quality and supported by engineering analysis	1	2	3	4	5
		Proposed design considers additional factors such as cost, manufacturability, sustainability, risk analysis and intellectual property	1	2	3	4	5
Poster Quality	Poster Quality	Poster presents the material in a well-organized way - from framing the problem to presenting the proposed solution	1	2	3	4	5
		Effective use of visual aids (figures, tables, charts, layout, etc.) improves effectiveness of poster	1	2	3	4	5
Q&A	Communication Skills	Questions were addressed with sufficient knowledge, confidence and clarity	1	2	3	4	5
		Team collaboration was evident by team participation in the presentation and Q&A	1	2	3	4	5

Table 3. Judging Rubric for Non-Capstone Projects.

2018 Engineering Project Showcase - Judging Rubric - for <b>Non-Capstone Projects</b>							
All Questions Are Graded on a Scale of 1 - 5							
			Not Satisfactory (1)	Satisfactory (2)	Good (3)	Very Good (4)	Exemplary (5)
Engineering Design Presentation	Problem Definition	Project need, desired specifications, and impact are defined and a project synopsis that informs the audience is presented.	1	2	3	4	5
		Demonstrates understanding of existing solutions and limitations or lack of solutions.	1	2	3	4	5
	Methodology	Demonstrates a well-defined approach in addressing the problem.	1	2	3	4	5
		The proposed solution contains sufficient detail and technical depth.	1	2	3	4	5
	Outcomes	The developed prototype (hardware/software) or analytical model are of high quality and supported by engineering analysis.	1	2	3	4	5
		Proposed product considers additional factors such as cost, manufacturability, sustainability, risk analysis and intellectual property.	1	2	3	4	5
Poster Quality	Poster Quality	Poster presents the material in a well-organized way - from framing the problem to presenting the proposed solution.	1	2	3	4	5
		Effective use of visual aids (figures, tables, charts, layout, etc.) improves effectiveness of poster.	1	2	3	4	5
Q&A	Communication Skills	Questions were addressed with sufficient knowledge, confidence and clarity	1	2	3	4	5
		Team collaboration was evident by team participation in the presentation and Q&A	1	2	3	4	5

## **D. How to Register Your Team**

Before registration, each team has to nominate/select a **primary member** who will represent the team and handle team registration and poster submission. *Only* this primary member will have authorization to edit information or submissions of the team.

All other members on the project are considered **additional members** and will be added by the primary member in the registration form that he/she submits online.

*The team should prepare these materials ahead of time:*

- **Project Title**
  - A short title for your project (e.g. Design of Heat Exchanger).
- **Competing Category**
  - The category which your project comes under (Capstone vs Non-Capstone), followed by your specific subcategory. (To be selected from a drop-down list).
- **Team Information**
  - The primary member will have to register all team members (first /last name and TAMU email address). All additional members will receive an email invitation through the portal to confirm their participation. This will allow us to include all team members in the communications and also recognize everyone involved in the project.
- **Project Abstract**
  - The project description will be viewed by the judges and will also be included in the Showcase Booklet. The project description should be a minimum of 600 characters and not more than 800 characters.
- **Sponsor/Faculty Approval**
  - If your project is sponsored by industry/faculty member, please have your sponsor review your project title and project description before submission.
- **Team Photo**
  - The team photo will be displayed in the judging portal.

*Please note: All submissions must be finalized by 11:59 p.m. on February 26, 2018. No changes will be allowed beyond that date.*

## **E. Registration Portal - (<https://eps.secure-platform.com>)**

To register your team, please click on this [link](#) and choose ‘Applicant Login’.

Below are the registration sections with additional information.

1. **Project Title**
  - A short title for your project (e.g. Design of Heat Exchanger).
2. **Project Category**
  - The category which your project comes under (Capstone vs Non-Capstone), followed by your specific subcategory. (To be selected from a drop-down list).
3. **Additional Team Members**
  - Select number of team members (excluding yourself on your team)

- Provide Full Name and TAMU email for each team member and press ‘**Send Request Now.**’
  - Once all requests are sent, each team member will receive an e-mail to provide further information.
4. **Faculty Advisor**
    - Provide the name of the faculty in charge of the class.
  5. **Project Abstract**
    - Provide a project description (600 – 800 characters) to be shared with judges.
  6. **Industry/Faculty Sponsor**
    - If your project is sponsored, your sponsor may be an organization (industry/agency/other) or a faculty within a department. We would like to recognize all project sponsors. Please provide the name of the organization and the person you are working within the organization for this project.
      1. Organization Name
      2. Point of Contact
  7. **Team Photo** (optional)
    - The team photo will be displayed along with the project description in the judge’s portal.
  8. **Electricity Requirements**
    - Teams requiring power to support their prototype may request access to power. (Due to limited number of power outlets at the facility, we will not be able to provide access to all teams. Please charge your laptops and mobile devices before the event).
  9. **Additional Space Requirements**
    - All teams will be provided access to an easel for their poster.
    - Teams with prototypes /display items may request a booth also.
    - Teams displaying large prototypes that do not fit on top of the booth may request additional space.
  10. **Appearance Consent Form**
    - During the event, college communications staff will be taking pictures and video. Program participants are asked to review and sign the appearance release form.
  11. **Primary Contact Agreement**
    - The primary member of the team (the person who submits all the project information) is the only team member who can edit this information and review judges scores.

You may choose to ‘**Save**’ the information to come back to it if the form is incomplete, or if you have all the information completed then ‘**Save and Finalize.**’

## **E. Poster**

All teams participating in the Engineering Project Showcase must have a poster. Teams are invited to bring hardware /software prototypes.

***All teams must upload a poster on the Engineering Project Showcase portal by 8:00 am on Thursday April 26, 2018. The poster uploaded in the portal does not have to be the final version. Only teams with a poster uploaded in the portal by the deadline will be assigned judges.***

- **How to submit your poster**
  - You must submit your poster via the Engineering Project Showcase submission portal. This is the same [portal](#) used for your team registration. The poster submission portal will be available from **April 23 8am to April 26 at 8:00am.**
  - File naming convention: yourprojecttitle\_yourcategory\_eps2018

- **Printing Locations and Contact Information**

*\*\*Students are responsible for the cost of printing the poster\*\**

*\*Most posters take at least a day to print, plan accordingly\**

**Any of the below locations can print your poster for you**

- **FedEx Office** - Located on University Dr. across from the Northside Parking Garage near the intersection of Asbury St. (**Contact no. 979-846-8721**)
- **Copy Corner** – Located at the corner of Texas Ave. and Manuel Dr. (**Contact no. 979-694-COPY**)
- **Office Depot Print Center** – Located inside Office Depot on Texas Ave. (**Contact no. 979-695-0763**)
- **Student Computing Center (SCC)** – Located next to Evans Library/Annex (**Contact no. 979-845-8306**)
- **College of Architecture** – Located on the first floor of the Langford Building (**Contact no. 979-862-8584**)
  
- **Resources**
  - Texas A&M (<http://writingcenter.tamu.edu/Students/Writing-Speaking-Guides/Alphabetical-List-of-Guides/Academic-Writing/Research-Posters>)
  - Poster Layout and Tips: <https://colinpurrington.com/tips/poster-design>
  - For information on Texas A&M University brand guides please see: <https://brandguide.tamu.edu/>
  
- **Overall Appearance**
  - **Template:** We have attached a poster template along with this e-mail. You *may* follow this template if you wish (or) make your own. While sizing your poster, please be aware that you get a 36X48" foam board to which you will attach your project poster using push pins.
    - 36"x24" (PowerPoint)
    - 36"x48" (PowerPoint)

- **Logos:** You should include the project sponsor logo, if applicable. **Do not use the Texas A&M University seal**
- **Fonts:** Texas A&M style guide for suggested fonts  
<https://brandguide.tamu.edu/fonts.html>
- **Color Palette**  
If you choose to incorporate Aggie Maroon, use the CMYK formula:  
C = 15  
M = 100  
Y = 39  
K = 69  
\*For accent colors and RGB (used for electronic media) Aggie Maroon  
<http://brandguide.tamu.edu/colors.html>
- **Recommended Poster Guidelines and Content** (Poster Guideline on Showcase Website)
  - Dimension Range: 30” (min) - 36” (max) tall by 40” (min) - 48” (max) wide. (Length and width might be interchangeable depending on the orientation of your poster).
  - Use text, charts, pictures, diagrams, and/or figures to describe your work
  - Heading: Project Title (must match the title was used at registration), Team members – list the team members involved in the project (first initial, last name, department acronym). Ex. A. Jones (MEEN), Professor(s) – list the professor(s) involved in the project and their department acronym (Dr., first initial, last name, home department acronym) Ex. Dr. A. Engineer (AERO), Industry Sponsor Company, Department.
  - Sections: Objective/Purpose, Methodology, Results, Discussion, Conclusions (if you have not yet achieved results, explain the status of your project using the best results you have), and Acknowledgements (optional)
  - Text: Font must be large enough so that words can be read from 3-4 feet away. Recommended fonts are Times New Roman, Arial, or Helvetica as they are easy to read. All text should be *at least* 20-30 pt. Use bold on headings. Headings should be at least 30-40 pt.
  - Layout: Place the information on the poster board so that the movement of the eye is natural. Ask your faculty mentor and other students to review it for clarity

## **F. Schedule of Event**

- **Dress Code:**  
Business Professional. Remember that you will be standing for an extended period of time; wear comfortable clothes and footwear.
  - *What to Wear:* Dress slacks or khaki pants (not cargo pants), button-up shirt, polo, blouse, cardigan, sweater, suit jacket, blazer, sport coat, dress shoes, knee-length skirts and dresses, heels or dress flats.
  - *What Not To Wear:* Cargo pants, jeans, shorts, short skirts, sweat pants, sweatshirts, t-shirts, sneakers, flip flops.

- **Schedule**

Friday, April 27<sup>th</sup> at Hall of Champions

- 9:00 am – 10:45 am      Check-In and Setup, teams may come and go.
- 10:45 am                      All teams must be present and setup must be complete.
- 11:00 am – 3:00 pm      Judging
- 3:30 pm – 4:00 pm      Awards Ceremony

- **Other Information**

During check-in, you will receive your specific table number and be provided with:

- An easel to display your poster.
  - Foam-core poster board to pin your poster to.
  - Push-pins to attach your poster to your board.
  - Table, if previously requested.
  - Extra space, if previously requested.
  - Access to power, if previously requested.
- Electricity will **not** be provided for charging your personal laptops, mobiles, etc. even if they support your project work
  - **At least one team member must be present at all times.** Team members may take shifts. You do not need your entire team present at all times.

## **G. Award Funds**

If your team wins an award your prize money will be placed into your student count within 2 weeks of the Engineering Project Showcase. Please note, if you have balance in your account your award money will go towards your balance. You can pull your award money out of your account by setting up your TAMU Heartland ECSI account. If you have any questions please contact Stephanie Courtright at [s.courtright@tamu.edu](mailto:s.courtright@tamu.edu).

## **H. Intellectual Property**

There are multiple ways to describe your project without disclosing confidential information. **If this is a sponsored project, please request approval from the sponsor before submitting your abstract.** If you would like to discuss IP issues with us, please email us at [inp@tamu.edu](mailto:inp@tamu.edu).

## **I. Poster Submissions**

The Engineering Project Showcase competition is sponsored by the College of Engineering. **All posters submitted in this competition may be used for promotional purposes by the College of Engineering.**

We look forward to your presentations and wish you good luck at the 2018 Engineering Project Showcase competition!

**For questions please contact us at [inp@tamu.edu](mailto:inp@tamu.edu).**