



ENGINEERING
TEXAS A&M UNIVERSITY

2018 Virtual Project Showcase Student Guidebook



*Video Competition
Showcasing the Innovative Project Work of Engineering
Undergraduates to Industry*

Event	Start Date	Deadline
Phase I - Team Registration	October 1 st , 2018	October 29 th , 2018
Phase II - Video Submission	November 1 st , 2018	December 5 th , 2018
Judging Period	December 7 th , 2018	December 16 th , 2018
Announcement of Winners	December 17th, 2018	
Winners Lunch with Associate Dean	Beginning of 2019 Spring Semester	

VPS Portal: [VirtualProjectShowcase2018](#)

Howdy Engineering Students!

Thank you for your interest in the 2018 Virtual Project Showcase (VPS). The goal of the competition is to showcase the innovative work of engineering undergraduate students to a wide range of industries, nonprofit organizations, and government agencies. Students are invited to submit a video (3 – 4 minutes) on engineering projects they are involved in. Students can participate as part of a team or individuals. This guidebook is designed to provide support to students for preparing and submitting their video entries. For questions, please email us at inp@tamu.edu.

A. Background Information

VPS was launched in Fall 2017 with 83 participating teams: 68% of participant teams were senior capstone teams (ECEN, ETID, CSCE, MEEN, other) while 32% of the teams represented AggieE_Challenge, class projects, design competitions, and other. The 2017 VPS engaged 60 industry judges representing 28 companies, listed below:

AI Biosciences, Inc.	Exothermix	SAIC
AM Innovation Center	Halliburton Energy Services	Schlumberger
Autodesk	Igloo Products Corp.	Shell Oil
Baylor College of Medicine	Kubota Tractor Corporation	Signature Wall Solutions, Inc
Blackhill Restoration	NASA	SyMPL
Boeing	National Instruments	T STAR
Daikin/Goodman Manufacturing	Naval Research Laboratory	USAA
Delta Structural Technology	Plantacor, Inc.	Vivatronix
Emerson	Quest Medical, Inc.	
Enbridge	R&M Global Advisors	

Below are links to last year’s top videos for Capstone and Non-Capstone categories.

	Top Capstone Design Videos	Top Non Capstone Design Videos
1st	Pressure Vessel Design Project (MEEN) - Video Link	WE - Autonomous Underwater Vehicle (Design Competition) - Video Link
2nd	Halliburton Heat Treatment (ISEN) - Video Link	Sandcrete (AggieE-Challenge) - Video Link
3rd	Mixed Reality Guitar Learning System (CSCE) - Video Link ST Genetics Automated Tube Decanter (MEEN) - Video Link 3D - Printed Antenna (ISEN) - Video Link	Superhydrophobic Sponges for Oil-water Separation Applications (AggieE-Challenge) - Video Link

Our goal for the 2018 VPS video contest is to recruit an even larger number of students participating in the contest, recruit more industry representatives as judges, and offer a special sub category for just freshman under the Non-Capstone category.

B. Eligibility

All undergraduate students enrolled in the College of Engineering at Texas A&M University are eligible to participate as **individuals or members of a team**.

C. Important Dates

Event	Start Date	Deadline
Phase I - Team Registration	October 1 st , 2018	October 29 th , 2018
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D. Categories

Students may participate in one of two categories:

- **Senior Capstone Design** – open to students currently enrolled in a senior capstone design course. (Subcategories: each Engineering Major is a subcategory)
- **Non-Capstone Projects**– open to all engineering students who would not qualify for senior capstone design. (Subcategories: AggieE_Challenge, Entrepreneurship, Design Competitions, Other Projects, Freshman Only)

E. Awards

Awards will be given to videos with highest average scores by the industry judges.

- **Senior Capstone Design**
 - **1st Prize - \$1,000**
 - **2nd Prize - \$750**
 - **3rd Prize - \$500**
 - **Best in Major** (for majors with 10 or more entries) - **\$100**
- **Non-Capstone Projects**
 - **1st Prize - \$750**
 - **2nd Prize - \$500**
 - **3rd Prize - \$300**
 - **Best in Subcategory** (for subcategories of 10 or more entries) - **\$100**

All winning teams will be invited for a luncheon with the Associate Dean for Academic Affairs in early spring semester. No team will be awarded more than one award.

F. Participation

Participation in the VPS requires successful completion of two steps/Phases:

- **Phase I- Team Registration** - All teams interested to participate in the VPS competition need to register their teams by the deadline, **midnight of October 29, 2018**. This will allow the organizers of the contest to identify the number and technical expertise of needed judges from industry. Only teams registered by the deadline will be eligible to submit a video entry in Phase II
- **Phase II – Video Submission** - All teams registered during Phase I are invited to submit their video entry by **midnight of December 5, 2018** to complete their entry to the contest.

Primary vs Additional Team Members- Before registration, each team has to select a team member (primary team member) who will represent the team and handle the team registration and video submission. Only this primary member will have authorization to edit the team registration or upload videos. All other members will be known as **additional members** and will be added by the primary member in the registration form that he/she submits online. All members will be recognized and award prizes will be equally divided to all members.

F1. Phase I- Team Registration (October 1st through October 29th, 2018)

During this phase, the primary member of the team will register the team by entering the following information in the portal [VirtualProjectShowcase2018](#)

- **Project Title** –This information will be used to identify your team.
Examples:
 - ENGR 401 – Halliburton Heat Treatment Project
 - AggieE_Challenge –SpaceCRAFT
 - Design Competition – FSAE
- **Project Category** – Select your project category from the drop down list. After selecting your Category, you may be prompted to select a subcategory. Categories include:
 - **Capstone Senior Design** – Seniors can select their engineering major as ‘Subcategory’
 - **Non Capstone** – AggieE _Challenge, Design Competitions, Other Projects (for juniors/ sophomores or teams that include multiple classifications), Freshman Only.
- **Add Team Members** – Enter here all additional team members (first name, last name, and UIN). No need to add the primary member.
- **Sponsored Project** – If your project is sponsored by industry or faculty, please notify your sponsor about your intent to participate in the VPS competition and get their approval.
- **SAVE vs SAVE & FINALIZE**
 - **Save & Finalize** – When all team information is complete, the primary member can press ‘**Save & Finalize**’ to submit the team registration. Please note that you will not be able to make any changes after you have clicked the ‘**Save & Finalize**’ button.

- **Save** – If you plan to make changes to the information provided, please press ‘Save’. You will be able to edit this information until the deadline of midnight of October 29, 2018. Please note that your registration is NOT complete until you press ‘Save & Finalize’.

F2. Phase II- Video Submission (November 1st through December 5th, 2018)

- **Video Link Upload** During this phase, the primary member of the team can upload the URL of the team video in the portal [VirtualProjectShowcase2018](#)
- **SAVE vs SAVE & FINALIZE**
 - **Save & Finalize** – If you have uploaded your video and you are not planning to edit and upload another improved version, please press ‘Save & Finalize’ to complete your submission. Please note that you will not be able to make any changes after you have clicked the ‘Save & Finalize’ button.
 - **Save** – If you have uploaded a rough version of your video and you intent to improve it and upload a better video later, please use ‘Save’. You can upload a new URL until the deadline of midnight of December 5th, 2018. Please note that your submission is NOT complete until you press ‘Save & Finalize’.

G. Video Guidelines

- **Duration** - A 3-4 minutes video that summarizes and highlights your project. Please keep in mind that a longer video is NOT a better video. Videos longer than 4 minutes or shorter than 3 minutes will NOT be considered for the competition.
- **Deliverable** - We recommend that you create a YouTube video (please ensure that you make the video ‘public’) then upload the URL of your YouTube video to the VPS portal.
- **YouTube Video Name** - Name your video exactly the same as your “Project Title” on the team registration form.
- **Video & Audio Quality** - Please test your video to ensure the quality of both video and audio.

H. Judges Criteria and Judge Comments

Each submission will be judged by at least three industry judges and the winning teams will be identified based on average total score comprised of four areas shown below:

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

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At the end of competition, the primary member of each team will be able to see the judges’ scores and comments.

Table 1. Judging Rubric for Senior Capstone Design Projects.

Senior Design Capstone Projects						
All Questions Are Graded on a Scale of 1 - 5						
		Not Satisfactory (1)	Satisfactory (2)	Good (3)	Very Good (4)	Exemplary (5)
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
Video Quality	Video 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 video	1	2	3	4	5

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Table 2. Judging Rubric for Non-Capstone Projects.

Non-Capstone Projects						
All Questions Are Graded on a Scale of 1 - 5						
		Not Satisfactory (1)	Satisfactory (2)	Good (3)	Very Good (4)	Exemplary (5)
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 the 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 approach contains sufficient detail and technical depth	1	2	3	4	5
Outcomes	The presented project outcome, rough prototype or model, are of high quality and it is supported by engineering data	1	2	3	4	5
	Proposed solution considers additional factors such as cost and feasibility	1	2	3	4	5
Video Quality	Video 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 video	1	2	3	4	5

I. Helpful Guidelines for Creating Videos

The following information is provided to assist students in developing a good video that presents the project in an engaging way.

- **Beginners**

For students who are new to video creation, it may be helpful to watch this short video: [Video Creation: A rolls, B rolls, catching the attention of audience and royalty free background music](#)

- **How to Design a Story Board**

The goal of your video is to display your project in a concise and engaging manner. Work with your team to create a story board that is organized into an introduction, body, and conclusion. For each part of your story board, you will need to collect and organize your material which includes, but not limited to, text, audio, images, other. Use the information below to create the sequence of words/images for your story board. Once the story board is complete make sure to review and edit your content.

- **Introduction:** Create an interesting opening sequence that captures the audience's attention. Use your introduction to give a brief overview of your project, explain the problem(s) you are addressing, the lack or limitations of current solutions, and define the impact of your solution.
- **Body:** Use the main body of your video to present your design methodology and your solution. Support your video presentation with hardware/software prototype images and engineering analysis data to strengthen the technical content of your video.
- **Conclusion:** Summarize the main results of your project, the expected impact to sponsor/other, and the knowledge you gained in this project. Wrap up the video with a memorable ending.

- **Tips on Narrating Your Video**

- Use a professional voice (or voices).
- Practice, practice, practice your script and story board before you begin recording.
- Make sure your narration fits within the 3-4 minute time allowance.

- **How to Put Your Story Board in Action**

Your video can be an illustrated animation or a real-time video that includes your friends as actors. There are many styles of videos and a variety of free video editing software available to you. Below are a few factors to consider before making your video:

- **Cast:** Decide the number of people who will make an appearance, whether physical or as a narrator. Assign roles and a script to each.
- **Tools/Devices:** Use a good camera and microphone. The Engineering Design Center in Zachry and Evans Library provide students with access to video recording devices of high quality.
- **Background:** Select a good location/background for your project.

- **Video Editing Software**

There is a variety of video editing software options including, but not limited to, the following:

- **Video editing software:** Adobe Premiere Pro, Camtasia, iMovie
- **Video engaging tools for animation:**
 - **Videoscribe:** Software tool to draw animations and storyboards and create engaging content. You can download the software from www.sparkol.com. Also, check out their YouTube channel for examples and tutorials.
 - **Powtoons:** Software tool to create animated videos and engaging content. Check them out at <http://www.powtoon.com/> and also check out [YouTube](#) for examples.
 - **Parafraze:** Software tool helps you create word animations. You can download this software from www.sparkol.com. Check out their [YouTube](#) channel for examples.

J. Music

Please consider the copyright laws for any music used for your video.

K. Intellectual Property

There are multiple ways to describe your project without disclosing confidential information. If this video is for a sponsored project, please request approval from the sponsor before submitting the video to the competition. If you would like to discuss IP issues with us, email us at inp@tamu.edu.

L. Video Submissions

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

We look forward to your project videos and wish you good luck at the 2018 Virtual Project Showcase competition!

For any questions, please feel free to contact Industry Nonprofit Partnerships at inp@tamu.edu

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