**2025 Spring Engineering Project Showcase (EPS)**

**TEMPLATE for Collecting Information Needed for Team Registration**

This template was designed to help teams ***collect information*** required for their team registration during a team meeting and then the primary member will use this information to register the team at the Showcase Portal. *You do not need to submit this form anywhere.*

* **PRIMARY MEMBER** – Choose a member who will serve as the primary contact for the team. Primary contacts will be responsible for registering the team, have access to the portal to see the judge scores and comments, and be responsible for sharing that information with the team.

Aidan Rader

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* **PROJECT CAPSTONE CATEGORY** - The major within which your capstone falls under.
  + \_\_\_Aerospace Engineering
  + \_\_\_Architectural Engineering
  + \_\_\_Biological & Agricultural Engineering
  + \_\_\_Biomedical Engineering
  + \_\_\_Chemical Engineering
  + \_\_\_Computer Science & Engineering
  + \_\_\_Electrical & Computer Engineering
  + \_\_\_Electronic Systems Engineering Technology
  + \_\_\_Manufacturing & Mechanical Engineering Technology
  + \_\_\_Multidisciplinary Engineering Technology
  + \_\_\_Industrial & Systems Engineering
  + \_\_\_Interdisciplinary Engineering
  + \_\_\_Mechanical Engineering
  + \_\_\_Material Science & Engineering
  + \_\_\_Ocean Engineering
  + \_\_\_OTHER CAPSTONE – Large Capstone Teams – (10 or More Members)

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* **PROJECT TITLE –** Choose a title for your project which will be used in (you will not be able to change it):
  + Your Poster Title
  + Your team identification within the judging portal by the judges
  + Your project title in the Showcase booklet

VFD Motor Controller

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* **PROJECT DESCRIPTION – Short project description (550 – 700 characters).** *The judges will read this before meeting with your team during the Showcase. Your description should address questions such as: What problem are you solving? What engineering challenge do you have in this project? How would your solution benefit the sponsor?* ***Character count: 0 / 5000 (550 min)***

Our team was tasked with developing a Variable Frequency Drive (VFD). Most of the traditional motor control methods are inefficient and can lead to unnecessary energy consumption and wear on equipment. The aim of a VFD is to solve this problem by more precisely adjusting motor speed with frequency and voltage control, which helps to extend equipment lifespan and optimize performance.

Some key engineering challenges in our project include designing an efficient power conversion system, generating accurate three-phase pulse-width modulation (PWM) signals, and ensuring smooth integration with industrial applications. This project will help our sponsor and any other users to lower operational costs, enhance process control, and promote more sustainable energy use.

* **TEAM SIZE – How many members are part of your team, including you?**

4

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* **TEAM MEMBERS –** Add all members of your team, including the primary member

|  |  |  |  |
| --- | --- | --- | --- |
|  | First name | Last name | TAMU email |
| Member 1 – Primary | Aidan | Rader | aidandrader@tamu.edu |
| Member 2 | Mackenzie | Miller | mackenziemiller@tamu.edu |
| Member 3 | Andrew | Nguyen | nguyen1wan@tamu.edu |
| Member 4 | Ryan | Regan | ryan13516@tamu.edu |

* **FACULTY INFORMATION**

|  |  |  |  |
| --- | --- | --- | --- |
|  | First name | Last name | TAMU email |
| Faculty Member | John | Lusher | john.lusher@tamu.edu |

* **PROJECT SPONSOR**
  + **TYPE** – Choose one from the list below:
    - \_\_\_Industry sponsored capstone
    - \_\_\_Government sponsored capstone
    - \_\_\_Faculty sponsored capstone
    - \_\_\_Not for Profit Organization
    - \_\_\_Student Sponsored
    - \_\_\_Other
  + **NAME** – List the name of the organization who is sponsoring your project. Please do not include names of individuals, only organizations. Examples: Boeing, US Air Force, TAMU – Department of Mechanical Engineering

TAMU – Department of Electrical Engineering \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* + **SPONSOR APPROVAL** –All teams are required to have approval from their project sponsor for presenting at the Showcase. Check one below:
    - \_\_\_\_**YES,** we have received sponsor approval
    - \_\_\_\_**NOT YET**, we are still waiting for sponsor approval
  + **NON-DISCLOSURE AGREEMENT (NDA) –** Has your team signed a Non-Disclosure Agreement (NDA) with your sponsor?
    - \_\_\_\_**YES,** we signed an NDA
    - \_\_\_\_**NOT YET**, we did not have to sign an NDA
  + **INTELLECTUAL PROPERTY (IP)–** Has your team signed an Intellectual Property (IP) Agreement with your sponsor?
    - **\_\_\_\_YES,** we signed an IP Agreement
    - **\_\_\_\_NOT YET,** we did not have to sign an IP Agreement
* **ELECTRICITY REQUIREMENTS** – We have limited number of booths with power. Do you anticipate requiring power to support your prototype on the day of the Showcase? We will not be able provide power to charge laptops unless your prototype includes a software demo.
  + \_\_Yes
  + \_\_No
* **EXTRA SPACE REQUIREMENTS** – Your team will be provided access to a 72inx30in table to place your poster and prototype. Do you anticipate requiring extra space to display your prototype?(Choose one)
  + \_\_\_No, we need a regular booth inside ZACH
  + \_\_\_Yes, we need a booth inside ZACH with extra space to accommodate a large project
  + \_\_\_Yes, we need a booth outside ZACH
* **PRIMARY MEMBER AGREEMENT** – I understand that I am the primary contact for the team and the only person who will be able to update the team information and receive updates regarding the event
  + **\_\_\_ I understand**

**What is NEXT?**

Your primary team member will use this information to register your team by the deadline (02/29/2024) at the **Engineering Project Showcase (EPS) Portal** ([link](https://tamueps.secure-platform.com/students/))

**Note:** To register your team, you DO NOT need to create an account. At the **EPS Portal** ([link](https://tamueps.secure-platform.com/students/)), choose **STUDENT REGISTRATION** and then click on the **TAMU SSO** box and then Continue to Awards Portal.

Use your TAMU credentials to access the team registration page.

**If you have any questions, email us at inp@tamu.edu**