First-Year Engineering Program:

ADVANCED ENERGY VEHICLE
DESIGN PROJECT

AEV Project Portfolio
Team AEV Project Portfolio

The team shall maintain a project portfolio and keep a complete record of the work that the team has done to create the final AEV product. The project portfolio should include all related documentation from the beginning of the semester until the completion of the project.

The team electronic notebook will be created using The Ohio State University’s website called “U.OSU” (u.osu.edu). U.OSU requires the team to have an active U.OSU to create and maintain the website. U.OSU is like WordPress and can be used until graduation or you leave the university. Once you leave the university, the site will remain viewable for three years, after which the site will be automatically archived. You will have the option to have the site exported to WordPress (a free and priceless website to maintain) if you want to have the website accessible after you leave the university.

The project portfolio should be organized such that it is useful to the team but can be understandable to an outsider (like an instructor, Graduate Teaching Associate, Undergraduate Teaching Associate, or a future employer). The project portfolio should include, but is not limited to the following:

- Main Cover Webpage (with creative team name)
- Contact Information of the Team Members (with a picture of the team)
  - Name, Major(s), and Email
- A Navigation Menu
- Up-to-date Design schedule (like a Gantt Chart or a schedule similar to the one in the Technical Communications Guide)
- Sketches, models, and drawings (both hand or CAD)
- Arduino Codes
- Lab Results
  - A paragraph or two describing the basic results and how the lab the helpful in the progression of the AEV project.
- Team Meeting Notes
- References

You are highly encouraged to include additional materials (like photos, videos, etc.) that you think will enhance the portfolio!

**IMPORTANT NOTE:** Do **NOT** upload any graded materials to the project portfolio. This is any document that has a grade on the physical copy. This is because even though this is a public/password protected website, uploading graded (material with a physical grade on them) material to a public website violates FERPA laws and regulations and could be a potential for academic misconduct.
How to Create a U.OSU website!
Source: http://resourcecenter.odee.osu.edu/uosu

1. First go to u.osu.edu and log in using your Ohio State Buckeye Account information (same as how you would log in to Carmen). This step will activate your account and allow you to be searchable in the database.

2. On the left toolbar under the Dashboard, click on “My Sites.”
3. Click on “Create a New Site” to create the team’s Website

Make sure to fill in this bubble and have the correct password

Fill in the following:

Site Name: “engr1182xxspr2015group_” (fill in your group letter in the blank and the section number in replace of the ‘xx’) or if you are in the ENGR 1188 section “engr1188spr2015group_”

Site Title: “ENGR 1182 Spring 2015 Group _” (This will GREATLY HELP THE GRADERS!!!)

Privacy: Fill in the bubble “Anyone that visits must first provide this password: “ and have the password (ASK INSTRUCTOR FOR YOUR CLASS’S PASSWORD) (This will allow the website to not be searchable in a Search Engine and anyone with the password can view the content (like a future employer).

Blog category: “Class Sites”
Example:

<table>
<thead>
<tr>
<th>Section</th>
<th>Class No.</th>
<th>Instructor</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6155</td>
<td>Trott</td>
<td>Mon Wed</td>
<td>8:00 - 8:55</td>
<td>308</td>
<td>Thur</td>
<td>8:00 - 9:20</td>
<td>224</td>
</tr>
<tr>
<td>2</td>
<td>6159</td>
<td>Trott</td>
<td>Mon Wed</td>
<td>10:20 - 11:15</td>
<td>308</td>
<td>Thur</td>
<td>9:35 - 10:55</td>
<td>224</td>
</tr>
<tr>
<td>3</td>
<td>6161</td>
<td>Trott</td>
<td>Mon Wed</td>
<td>11:30 - 12:25</td>
<td>308</td>
<td>Thur</td>
<td>11:10 - 12:30</td>
<td>224</td>
</tr>
<tr>
<td>4</td>
<td>6163</td>
<td>Gilat</td>
<td>Mon Wed</td>
<td>12:40 - 1:35</td>
<td>308</td>
<td>Thur</td>
<td>12:45 - 2:05</td>
<td>224</td>
</tr>
<tr>
<td>5</td>
<td>6165</td>
<td>Schrock</td>
<td>Mon Wed</td>
<td>1:50 - 2:45</td>
<td>308</td>
<td>Tue</td>
<td>2:20 - 3:40</td>
<td>224</td>
</tr>
<tr>
<td>6</td>
<td>6167</td>
<td>Schrock</td>
<td>Mon Wed</td>
<td>3:00 - 3:55</td>
<td>308</td>
<td>Thur</td>
<td>2:20 - 3:40</td>
<td>224</td>
</tr>
<tr>
<td>7</td>
<td>6169</td>
<td>Parris</td>
<td>Mon Wed</td>
<td>4:10 - 5:05</td>
<td>308</td>
<td>Thur</td>
<td>3:55 - 5:15</td>
<td>224</td>
</tr>
<tr>
<td>8</td>
<td>6187</td>
<td>Stephens</td>
<td>Tue Thu</td>
<td>5:20 - 6:15</td>
<td>208</td>
<td>Thur</td>
<td>5:30 - 6:50</td>
<td>224</td>
</tr>
<tr>
<td>9</td>
<td>6171</td>
<td>Bixler</td>
<td>Tue Thu</td>
<td>8:00 - 8:55</td>
<td>308</td>
<td>Fri</td>
<td>8:00 - 9:20</td>
<td>224</td>
</tr>
</tbody>
</table>

I am in Professor Schrock’s class and was placed at Table J so this is how I would name my website:

The name of my website will be: **engr118205spr2015group**

The title of my website will be: **ENGR 1182 Spring 2015 Group J**

Once this is all completed select “Create Site”

4. Once you create the site, go to the Dashboard of your Site by dragging the mouse over “My Sites” (top left corner). Scroll down to your site and click on “Dashboard”.

![Dashboard screenshot](image-url)
To Add a user (or the rest of your team so they have access) go to the left toolbar and mouse over users and click on “Add New” and add the rest of your team (as Administrators) by adding their email addresses. You will need to add your teammates and instructional staff to the website as administrators. Your teammates will need access so they can edit the site, and your instructional staff will need access so they can grade your team’s work.

**Important Note:** to add the other users, they must log in to U.OSU and accept the Terms and Conditions before they can be added.

5. **OPTIONAL:** To eliminate the comments at the Dashboard and on the toolbar on the click on to “Settings” and click on “Discussion” and uncheck “Allow people to post comments on new articles”.

![Discussion Settings](https://example.com/discussionsettings.png)
How to Create Pages for the Project Portfolio

The pages help make everything organized for the users to clearly see the project.

1. To create a page, go to “Pages” on the Dashboard toolbar and click on “add new” (also make sure the webpage that is being edited is shown on the top (under the address bar)).

2. The following window will appear
Here is where the team can insert executive summaries, lab memos, team meeting notes, etc. In the text tab, html coding can be done if someone on the team knows HTML, else the icons above the text box can be used (HTML is not required for this course, everything is provided for the team to be successful. HTML is there for teams who would want to go above and beyond what is required to help them stick out and make their project portfolios better. Again, the grade is **NOT** based on the team’s knowledge of HTML!).

3. **OPTIONAL:** If the team wants to have pages (say for team meeting notes), create a page titled “Team Meeting Notes” (or whatever title the team feels should be the parent page should be called) then create another page and on the right side under the “Page Attributes select the “Team Meeting Notes”. This creates a page within a page (Pageception!?).
How to Insert Pictures into Pages

Pictures, PDF’s, and Word documents can be used to help illustrate what the team wants to represent visually.

1. On the Edit Page (Dashboard >> Pages >> All Pages), click on “Add Media”

2. Click on the “Upload Media” tab and download the picture, video, PDF, etc. the team wants to insert into the project portfolio. Once downloaded make sure the figure is labeled properly on the right side. Also on the right side toolbar the team can select to have the figure centered. It is also preferred to have the figure be full size (This will help when the user clicks on the image on the website, it will enlarge to its full size).
3. For Excel plots or Word document tables either the team can use Snipping Tool (Microsoft Windows 7 or higher) or copy the Excel Plot and paste into a new Word Document (as Paste Special >> Picture (PNG)) then right click on the figure and click “Save as Picture”.

**Note:** Figure names in the website will appear below the image so for tables, make sure to add the table’s name above the table (in a word document) and save as a picture so full credit will be given.
Frequently Asked Questions about U.OSU! (Last updated: 17-Dec-2014)

1. I cannot find a teammate to add them for admin access (so they can upload content).
   Make sure the teammate has logged into u.osu.edu and has accepted the Terms and Conditions. Once this has been done the teammate should be search-able.

2. How do I insert an Excel plot or figure?
   For Excel plots or Word document tables either the team can use Snipping Tool (Microsoft Windows 7 or higher) or copy the Excel Plot and paste into a new Word Document (as Paste Special >> Picture (PNG)) then right click on the figure and click “Save as Picture”.

3. What do I put in the Project Portfolio for the Labs (i.e. Labs 1 – 7, Performance Tests, etc.)?
   For Labs 1 – 7 a one or two paragraphs would be sufficient. Enough information so that the reader could be able understand why the need for the lab and what important information, results, data, etc. the team got from completing the lab. Pictures are highly encouraged (just make sure they are labeled properly and the picture is clear and useful to the reader). Lab 8 is not included in the project portfolio!!

   For Performance Test 1 – 3 labs more is involved so few paragraphs describing the objectives from the labs, the goals, progression of the AEV, and results of the lab.

   The preliminary design report (PDR) and critical design review (CDR) can be copied directly into the website.

4. What is the Project Schedule? Why do I need one?
   See the Technical Communications Guide for an example. Another GREAT resource to use to make the project schedule is Microsoft Project. It is loaded on most of the ENGR Region 1 Computers (all the computers in Hitchcock 324). The Project Schedule is also known as a ‘Gantt Chart’ and in Microsoft Project, it is located under View > Gantt Chart.
The need for one is for the team to decide what is important and for the team to manage the project. This especially comes into play with the Performance Tests. By keeping a Project Schedule will help illustrate how the team is able to manage a small design project to meet deadlines. Here is an example of a Project Schedule using Microsoft Excel:
5. **Format of Team Meeting Notes**

Things to include in the team meeting notes; date, team members present (not all need to be present but at least two members need to be at the meeting for it to be a TEAM meeting), topics discussed, a brief summary of what was discussed, and what needs to be done still to continue/finish the project. Here is an example of a formatted team meeting note:

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**Date:** 10 – Nov – 2014  
**Time:** 12:07 pm  
**Members Present:** Jacob Allenstein and Nicholas Ohanian  
**Topics Discussed:** Updating Labs 3 and 4  

**Content:**

Today’s main focus was on creating webpages for Lab 3 and Lab 4 and going to the hobby store to look over parts. The team also brainstormed ideas of what to 3D print and would be beneficial to the AEV design.

**To do/Action Items:**

- Continue making of the website  
- Talk to Professor and discuss layout of the project portfolio  
- Talk to the GTA on the limitations on 3D printing

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6. **Testing Logs**

Testing logs should be informative to the group and should include basic information such as; Arduino Code + comments, Energy Usage, the function of the code, and if there were any problems with the code. Here is an example of a testing log:

**Sample Code for Project Portfolio:**

```c
accelerate(4,0,50,3); % Accelerating all motors to 50 %
goFor(15); % Run all motors for 15 seconds
motorSpeed(4,20); % Reduce the speed to 20 %
goFor(30); % Run for 30 seconds
reverse(4); % Reverse the motors
motorSpeed(4,15); % Run all motors at 15%
goFor(2.0); % Run last command for 2 seconds to reduce velocity of
 % the AEV
```

**Energy:** 145.05 Joules  
**Comment(s):** Ran the AEV on straight track and found out that 50% is WAY too fast. The AEV went way too far. Need to bring down the run time overall and the 50% down to a slower speed.
7. **Additional Help?**
   There are two helpful websites in creating u.osu.edu: