First-Year Engineering Program:

LAB ON A CHIP
DESIGN PROJECT

Nano Project Portfolio
Team LOC 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 Lab on a Chip (LOC) 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)
- Complete Design Documents including Sketches and drawings (both hand or CAD)
- Lab Memos/Results
- 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 you 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: “engr1182nanoxxspr2015group_” (fill in your group letter in the blank and the section number (01) in place of the ‘xx’)

Site Title: “ENGR 1182 Nano 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>Course</th>
<th>Class</th>
<th>Instructor</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1182.03</td>
<td>6388</td>
<td>Trott</td>
<td>Mon Thur</td>
<td>11:30 - 12:25</td>
<td>224</td>
<td>Tue</td>
<td>11:45 - 1:05</td>
<td>224</td>
<td>Nano</td>
</tr>
</tbody>
</table>

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

The name of my website will be: engr1182nano01spr2015groupj

The title of my website will be: **ENGR 1182 Nano 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”.

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](image)
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 – 5, Preliminary and Final Tests, etc.)?
   For ungraded electronic versions of Labs 1 – 5 memos and lab tour summary can be copied directly into the website.

   For the preliminary/final tests provide few paragraphs describing the objectives from the labs, the goals and results of the lab. Provide the calibration equations and curves used to obtain results and enough information so that the reader could be able understand 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).

   The design documents 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. 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:

```
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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4. **Dos and Don’ts of Electronic Project Notebooks**

**DO**

i. Use both pages and sub-pages where applicable and label pages with meaningful short names for easy navigation. When you create these pages, they will automatically be populated to your navigation menu.

ii. Plan ahead for the number of pages you will need in your electronic notebook, but don’t be afraid to add additional pages later in the semester.

iii. Keep the old copies of updated documents such as the Project Schedule, Team Meeting Notes and Chip Designs. These must be updated for each design review. It is suggested that you keep these in reverse chronological order (newest on top) as links on your pages.

iv. Update and place assignments in a binder or folder as they are handed back to you. This way they won’t get lost. Only non-graded assignments should be uploaded to your electronic notebook.

v. Initial and date each document you upload, create, or revise.
vi. Decide how you want to organize your notes, designs, etc. before you start using them a lot. Use a consistent format throughout when applicable so that it will look more professional.

vii. Maintain a professional looking electronic notebook. If this were a real engineering internship/job, what would you want your boss and the customer to see?

viii. Consider website design when you are creating your electronic notebooks. Don’t be afraid to leave white space to improve readability and provide text to supplement links.

ix. Try to organize the electronic notebook functionally. Think about how the electronic notebook will be used. Look at it from the perspective of someone outside of the group who may be trying to find something.

x. Strive to maintain an electronic notebook from which you could retrace your steps and recreate the entire process of designing the LOC.

xi. Take photographs of your designs as you build and develop it. Use proper practices for taking technical photographs (use an object as a scale such as a ruler and avoid having body parts or team members in photographs). Upload these on your site to supplement your text.

DON’T

i. Don’t wait until the last minute to update the electronic team notebook. Updating as you go will make it easier towards the end of the semester.

ii. Don’t get rid of old ideas or papers. Keep them as links for referencing your past work.

iii. Don’t upload graded materials to your electronic notebook. Keep graded papers in an organized binder for the design reviews and reference.

1. Additional Help?
   There are two helpful websites in creating u.osu.edu: