# EE400D Blog Posting “Starter Kit”

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Why a Blog
The blogging requirement for EE400D serves several important functions:

- Your blog posts provide a chronological history of your work over the semester.
- It captures the evolution of returning projects over several semesters.
- It allows other students and professionals to learn from the work being done by CSULB students.
- Allows you analyze and review previous work done on EE 400D projects
- It allows you to show your work to others (e.g., at a job interview)

What to Blog
- Project Documents
  - Requirements
  - Block Diagrams
  - Interface Documents
  - Resource Reports
- Documentation of the Design Process
  - Preliminary sketches of the design
  - Back of the envelope calculations
  - Trade-off studies
  - Mathematical Models
  - Computer Simulations
  - Physical Models
  - Full-scale Prototypes
  - Scale Models
- Mistakes, how they were discovered and how they were overcome
- And everything else!
Blog Format

When creating a posts, there are several formatting rules you should follow.

1. As much as possible, posts should have only one author. There may be a time when more than one person is working on something, if that’s the case, each person’s work should be identified.
2. Each post always includes a title, the author’s name, and the author’s position. The semester and project name should be included in the title.

3. You will typically want to have at least one photo that appears at the top of your post. Other accompanying photos can also be included to help create a visual for what is being described lower in the text.
4. Add formatting, such as bold, italics, bullet points, tables, etc. within the post itself. The software used to post your work can behave strangely, ruining your design work when the software refuses replicating what you designed in MS Word or Excel.
5. If you do need to post tables or spreadsheets, it is often easier to take a screen shot and post it as a graphic.
6. Here is an example of a good blog post by Simon Abatay of SpiderBot on 3D Mold Making.
Register and become an Author

1. Blog posts are written by all project members. Blogs may only be posted by a project or division manager. If you are a Project or Division manager:
   a. Create an account by going to the Arxtterra home page and selecting Register from the My Account drop down menu.
   b. Send me (hellogaryhill@gmail.com) your Username Name so I can make you an “Author” which allows you to post to the site (please Project and Division Managers only).

2. Once you are an author, go to the Arxtterra home page and select Login from the My Account drop down menu.

3. You will notice that there is now a grey bar up on top. This will be your navigation tool for creating and editing posts.
Crafting and Posting Your First Blog Post

1. After logging in, click on “Edit Page” on the grey bar on top.
2. Hover over “Post” on the left, then click on “Add New.”
3. Once you’re on this page, you can start composing your post. Start by adding a **Title** to your post.
4. Now start writing the body of your post.
   a. Note: The system is set to preview the first bit of each post in the project page and a “Read more” tag will be generated automatically. Write your post with this in mind.
   b. On the first line of your body, include authorship so credit could be given accordingly.
      i. If there is only 1 person who worked on the post, then type the following:
         By: Name – Division the student is in
      ii. If there is more than 1 person who worked on the post, then type the following:
         By: Name 1 (area of contribution) and Name 2 (area of contribution)

5. Use Header tags for longer posts so you can add a table of contents (next step).

6. For design documents which require a table of contents add [toc] right after the names of the project team members.
7. **DO NOT FORGET**: Once the body is completed, be sure to select your project under Categories, Communities, Members and Communities. This will ensure your post gets posted to the correct project page.

**Categories**

<table>
<thead>
<tr>
<th>All Categories</th>
<th>Most Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Pathfinder</td>
<td></td>
</tr>
<tr>
<td>☐ RadSSC</td>
<td></td>
</tr>
<tr>
<td>☐ Raspberry-Pi</td>
<td></td>
</tr>
<tr>
<td>☑ Rover</td>
<td></td>
</tr>
<tr>
<td>☐ SegBoard</td>
<td></td>
</tr>
</tbody>
</table>

**Featured Image (Required)**

Add a featured image to your post by clicking on “Set featured image” under featured image on the right. The featured image is the small, square photo that adds a visual to the title of your post. The featured image is **required for all EE400D posts**.

a. Make sure your featured image is square (2” x 2”) and has a resolution of 72 dpi (dots per inch).

b. Note: The featured image will be used in the preview of your blog post. For example, when you go to a certain project’s home page, the featured image of the post will be on the left and a preview of the post content will be on the right.
c. If you don’t upload a featured image, you will get the gray box with a pencil shown here. Boring, isn’t it?

d. For ideas, the teaser photo can be unique, or a small section or version of a larger photo that appears in the blog post.

e. For help on creating the teaser image see “Formatting Images using Cesium” in this document.

Preview and Publish

You can preview your post by clicking on the “Preview” button under publish on the right. Check for grammar and formatting. When your post is completed, click on the “Publish” button under publish on the right
Your post will now be posted and you can view the post by clicking on “View Post” under the title.
Editing a Post

If you need to make an edit to a published post, click on “All Posts” on the left, find the post you want to edit and click on “Edit.”

1. Once you are done editing, republish your post by clicking on “Update” under publish. 
   **Note:** updates may take a little time to be posted. Check back in a few hours to make sure your post was indeed updated.
Formatting Images using Photoshop

1. Resize larger images by preparing them in Photoshop or other free online alternatives to compress your images. This ensures that the Arxterra server isn’t overloaded with file sizes that are too large.

   i) This image is taken by an LG phone is 17.1 Mbytes and will be edited in Photoshop for posting.
2. Begin by cropping, resizing, and setting the resolution of the image to 72dpi. The dimensions of the sample image are only 640x480.
3. Select the “Save for Web & Devices” from the File menu
Notice in preview mode, even with JPEG compression at Low, the image quality is still good and has gone from 8.38M bytes down to only **186K**. Remember the original was 17.1 Mbytes. **You will now notice your web pages load noticeable faster!**

However, keep in mind that you need to optimize for size and readability. **Make sure text within images are still readable.** This is especially important for charts, tables, and diagrams that have detailed information on it.
Formatting Images using Cesium
By Paul Oo F’15

Compressing your “Featured Image”

If you can’t afford Photoshop, Cesium is an easy to use software you can download for image compression. Unfortunately, this software is only compatible with Windows OS.

This is the opening window to the software. Add your picture files by clicking on (which should already be formatted as a square) and perform the following procedure:

1 Make sure that your image has been squared. All iPhones have the ability to take square pictures. Androids should download photo editing apps like “Photo Squarer”. When sending the file to your email, make sure you choose Medium to High in file size, (compressing low quality images will give even lower quality images).
1. Click on the image file that you want to compress
2. Under “Compression Options”, change “Quality” to 80%
3. Click on Resize to actually change the amount of pixels used
4. Then Click on “Same for all”
5. Change the dimensions to 144x144 (this is the pixel dimensions equivalent to 2”x2”)
6. Click on “Keep Aspect Ratio”
7. Click on “Do not enlarge image”
8. Under “Output Folder”, choose the location to place the newly compressed image
9. Click on “Keep Structure”
10. Press 
11. You can verify that the image has been compressed if you see “New Size” and “New Resolution” has decreased.

<table>
<thead>
<tr>
<th>Name</th>
<th>Size</th>
<th>New Si</th>
<th>Ratio</th>
<th>Quality</th>
<th>Resolut</th>
<th>New Resol</th>
<th>Full Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMG_1688.jpg</td>
<td>1377...</td>
<td>4.94 K</td>
<td>100 %</td>
<td>3264x...</td>
<td>139x104</td>
<td>C:/Users/Paul/Downloads/IMG_1688.jpg</td>
<td></td>
</tr>
</tbody>
</table>

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2 After using Cesium, click on the image from the specified output location to verify that the new picture has been resized.
Uploading Images

1. To upload an image, place your blinker at the spot where you would like your image/file to be posted. Now click on “Add Media.”

2. The following screen will appear. You can now drag and drop your files for uploading. **DO NOT FORGET TO COMPRESS YOUR IMAGES BEFORE UPLOADING**
3. Click on the file you would like to insert. Then click on the “Insert into Post” button on the bottom right.
   1. Note: If you are inserting an image, you can also change the size of the image under “Attachment Display Settings” and “Size” before inserting it into your post.

4. Your file is now inserted into the post.
Uploading Word Documents and PDFs

1. Uploading Word Documents and PDFs is very similar to uploading an image. Place your blinker at the spot where you would like your file to be posted. Now click on “Add Media.”

2. The following screen will appear. You can now drag and drop your files for uploading.

3. Click on the file you would like to insert. Then click on the “Insert into Post” button on the bottom right.
4. Your file is now inserted into the post.

This solidworks session features techniques for creating shapes, and removing shapes within a design. It also covers alternative techniques and methods for modeling, and the benefits of one method versus another.

What's nice about this breakout session is that we're able to take these techniques and demonstrate them in an applied manner with the modeling of a servo motor, which is very commonly used in ME1000.

solidworks breakout 2
Embedding Videos

1. Video files are really large and should not be directly uploaded onto Arxterra.
2. First upload your video file to YouTube or another site you could easily link to.
3. Click on the “Insert/Edit embedded media” icon.
4. Insert the link to your video next to “File/URL.” Make sure “Iframe” is chosen next to “Type. Click on the “Insert” icon on the bottom right.
5. You will not be able to preview the embedded video and it will just look like this in the post. To see if your video was successfully embedded, click on the “publish” button if this is a new post, or the “update” button if this post was previously published, then click on “View Post” under the title.

The x-axis home button, shown in the top left corner of the Pronterface window, was used to order the x-axis stepper motor to be driven to home position and stop. The video below shows the x-axis motor moving till it reaches home position and stops.
Formatting and Styling

1. Equations, charts, and table formatting is not usually preserved in WordPress. Upload them as image files instead to ensure formatting is preserved.

MS Word’s equation writer can be used to create present calculations and mathematical models, but the blogging software will not be able to recreate it. Instead take a screen shot of any “special” text (equations, spreadsheets, etc.) and import them as graphics instead.

2. Make sure to label and have explanatory texts for all picture files.
Project Manager Checklist

☐ Blog Post includes a Featured Image.
☐ Blog Post includes Authors name and position.
☐ All photos have been resized, compressed, and have a resolution of 72dpi.
☐ Photos, tables, graphs, are labeled and have explanatory text.
☐ Text within an image or table is readable.
☐ Blog post does not include material from a previous post. If you are using calculations from a previous semester’s blog post, simply include a link to the post that contains the information. There are exceptions to this rule. If you are not sure ask the instructor.
☐ All photos are original to the project.
☐ Images, including screen captures of tables, are readable.
☐ Make sure to proofread to catch any English, typos, and other errors.
☐ Look for Plagiarism.
☐ Only post to your area.
☐ Only upload individual photos once – they may take a few hours to post!
☐ Use the preview function so you can view what the post will look like when it goes live. This will allow you to make any final corrections or changes.