Senior Design I
Project Documentation Guidelines

Your project goals and objectives, specifications and requirements, research, and design documentation should conform to the following guidelines, but should have additions or deletions where appropriate for your specific project case:

Format:

1. The document should be of professional appearance, with a non-paper cover and bound. Note-books or ring binders are not permitted.

2. The length has a minimum of ninety originally authored pages for a group with three members and one hundred and twenty originally authored pages for a group with four members. Even though the document has multiple authors the document must be of a uniform and consistent format, such that it appears that it was written by a single author. Page count begins with the Executive Summary, which must be shown as page 1. Pages prior to the Executive Summary, such as the title page and table of contents, must be shown using lower case Roman numeral. Appendices can be of any length but are not included in the page count. Preface pages, table of contents and other similar pages are not included in the page count. **Content that is superfluous, irrelevant, or does not directly relate to your project will not be counted towards the page count.**
[WARNING: the following items should not appear in main body of report. They can be allowed in appendix. Any violation incident will result in one letter grade deduction in final grade.
NO programming code; NO debug window screenshot; NO images of common electronic parts such as transformer/HDMI/USB/RS232/transistor/Resistor etc; No image of pins layout;
NO list of costs for minor components such as transistor/resistor/capacitor;
Combination of all images of Breadboard testing is no more than one printed page;
Combination of all images of components is no more than one printed page;
Combination of all data sheet material should be limited to two printed page;
Combination of all tutorial materials should be no more than 5 printed page;

3. Paper size must be 8.5" x 11", with 1" margins on the top, right, and bottom of each page. The left margin may be 1.5" for binding. The paragraphs are to be fully justified (both left and right sides). New paragraphs may begin by indenting the line or by not indenting but leaving a space. However, DO NOT do both. The body font must be Times Roman, Arial, Helvetica, or be approved by the instructor with a font size of 10-12 pts. Heading fonts can be no larger than 20 pts. The document must be **single spaced** and printing can be single or double sided. Color printing is optional and left to the discretion of the groups. **Please check the single space requirement since the MS Word default is 1.15 in most cases.** **[Please compare with sampled page to identify any problem]**

4. Any supplementary material must be attached in a sound manner.

5. The appendix must contain written authorization (emails, letters, or explicit permission citations) for rights to include or use copyrighted content.

6. All elements of the document which support the written text, such as figures, table, illustrations, code segment, charts, etc., must be referred to in the body of the text, and the citation must appear before the element is shown. Supportive elements cannot begin a chapter, section, or paragraph. All supportive material must be captioned, which include the element name and number and a description. If the element is not authored by you, the caption must contain wording identifying that you have permission to use the element. All copyrighted contents must display the content's origin or author, and an appropriate phrase such as **"reprinted with permission from XXXXXXXXXXXXX"** immediately following the figure or table caption. The actually permission authorization must be included in the appendices.

Contents:

1. Cover page with title, group number, team members, date, and any other relevant information, such as participating organizations and sponsors.

2. Executive summary: An administrative and technical abstract, which includes a brief description of the project, the project objectives, and the technical approach. This is really an overview of 3A, 3B, 3C, and 3D. This is page number 1.

3. Technical content (This is NOT an outline, just a list of what needs to be included) -

A. Technical objectives, goals, specifications, and requirements
B. Research and investigations
C. Impact of realistic design constraints including economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
D. Identification and review of related standards
E. Design overview, technology, architecture content
F. Explicit Design with parts list (BOM - bill of materials), electrical schematic diagrams, class diagrams, data structures
G. Build, prototype, test, and evaluation plan
H. Personnel and bibliography of related work, if any
I. Facilities and Equipment
J. Consultants, subcontractors, and suppliers
K. Prototype Construction: Content related to building and testing of the project. Include needed facilities and equipment, PCB, etc.
L. Project Operation: Describe the correct operation of all functions. This is the "owner's manual" section.
M. Personnel: Project team content. N.
Consultants, subcontractors, and suppliers

4. Administrative content -

A. Budget and financing (text, numbers, tables, charts, figures, diagrams).
B. Milestone chart for all activities related to the project

5. Project Summary and conclusions.

6. Appendices: A. Copyright permissions, B. Data-sheets (if necessary),
C. Software (if necessary), D. Other

7. **Due date - Thursday, April 27, 12:00 PM (noon) in HEC-418. This is the Final Exam period for this class for the Spring 2017 term. Documents submitted after this time will receive a one letter grade deduction in the final grade for this course for all members of the group. <u>The final document submission includes a bound printed</u> <u>copy, a source file, and a .pdf file.</u>**

Why didn't we get an "A"? Was it turned in on time? Did if follow the required format specified about? Did it meet the required page count? Was the design summary complete? Was all of the copyrighted material corrected noted and permission requested?

Table of Contents Assignment

Create a TOC for your project documentation. Instead of using page numbers, enter the number of pages you estimate for each entry in the table of contents. Ensure that the sum of this estimate is 120 for groups with 4 members, or 90 for groups with 3 members.

Your TOC is due: Friday 3/24, 2017 submit on Webcourses

Example (but needs much **more detail**)

My Great Senior Design Project

Total pages: 126

Table of Content	Due 3/24, 12pm	Webcourses (soft copy)
Draft Document	Due 3/31, 12pm	Webcourses (soft copy)
Final Document	Due 4/27,12pm	HEC418 (hard copy), USB or Webcourse (soft copy)