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## Overview

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The syllabus shows that 0-10% of your course grade is allocated to "Quizzes/Assignments, Lab Practical, Student Current Topics Presentations". This semester, this Current Topics Presentation (CTP) assignment is weighted as 5% of your grade.

**This is an individual assignment. Each student must work alone, without help from another person.**

Submission of this assignment is due by **11:59pm on Wednesday, March 30<sup>th</sup>**

Objectives of this assignment:

- Learn about current topics associated with embedded systems
- Develop skills in preparing a technical presentation outline

Overview of assignment requirements:

- **Step 1:** Investigate current topics closely related to embedded system design. Identify at least 5 interesting technical topics not currently covered in detail by ECEN 4613/5613.
- **Step 2:** Prioritize the topics and list them in order of importance.
- **Step 3:** Choose one of these topics and develop a detailed lecture **presentation outline** in PowerPoint.
- **Step 4:** Identify at least 5 URLs that contain detailed information that would support development of a full PowerPoint presentation regarding your chosen topic. Prioritize the URLs and list them in order of importance as references for development of a full lecture presentation.
- **Step 5:** Submit a single PowerPoint file containing all the required information.

**See detailed requirements for each of these steps on the next page.**

Grading on this assignment will be based on the following:

- How well the submitted work meets the stated requirements, including technical content and its relationship to embedded system design
- Whether the student just met the assignment requirements, or whether the student stretched to exceed the requirements

It should be very straightforward and not very time consuming to earn an average grade on this assignment. Students can exceed the requirements in many ways, including the following:

1. Include more excellent topics and URLs than required
2. Include more detail and/or polish in the presentation file (for instance, instead of submitting only a detailed outline, students could submit a complete draft presentation)

## **Details**

**Step 1:** Investigate current topics closely related to embedded system design. Identify at least 5 interesting technical topics not currently covered in detail by ECEN 4613/5613. These could be current topics in embedded systems that are brand new technologies, or they could be established topics that have been known in industry for years. Technical topics are required. Pure research projects/topics or unproven concepts are not allowed. You must identify topics that you think you, others in the course, and employers in industry would find valuable and important. These topics should be appropriate for use in ECEN 4613/5613 lectures in future semesters.

**Step 2:** Prioritize the topics and list them in order of importance. Think about the topics that you've identified and how those topics apply to the skill sets needed by employees in industry. List the topics in order, starting with the topic you think would be most valued by students and industry employers. Include your prioritized list of topics as a slide in the presentation file described below.

**Step 3:** Choose any one of these topics from your list and develop a detailed lecture **presentation outline** in PowerPoint that could (with additional effort) be developed into a polished 20- to 40-minute technical lecture presentation. Presentation files that include detailed and relevant notes will typically qualify for higher scores. Presentations must be submitted in **.ppt or .pptx format**. Presentations will be submitted as detailed in the following section "Presentation File Requirements".

This assignment is focused on development of a detailed presentation outline, not a complete polished presentation. A detailed outline includes not only a well-organized and ordered list of discussion points, but it also includes key notes (and potentially diagrams/pictures) that can help guide the development of a detailed presentation. You may choose to use the "Outline" view in PowerPoint, or just create your detailed outline as a set of ordered slides. You can choose to interpret "presentation outline" as a "draft presentation", if you wish.

**Step 4:** Identify at least 5 URLs that contain detailed information that would support development of a full PowerPoint presentation regarding your chosen topic. Prioritize the URLs and list them in order of importance as references for development of a full lecture presentation. Include this prioritized list in your presentation. URLs could include links to on-line articles, presentations, specifications, data sheets, or application notes. URLs containing key information and informative diagrams or pictures should be prioritized higher than URLs containing less detail.

**Step 5:** Submit a single PowerPoint file containing all the required information. Submit this file via CULearn by the due date.

Note: The materials submitted in this assignment may be used in lectures in future semesters. Do not submit anything that is company confidential.

## **Presentation File Requirements**

Each student must submit a presentation file to the instructor. You must submit the presentation electronically (**via CULearn**) by **11:59pm on Wednesday, March 30<sup>th</sup>**. Submission details will be provided via CULearn. Guidelines for the presentation are given below.

1. **This is an individual assignment. Each student must work alone, without help from any other person. You should not collaborate/discuss this assignment with other students.**
2. The presentation document must be created using Microsoft PowerPoint presentation software. The document must be well organized, easy to read, free from spelling and grammatical errors, and must include page numbers. Use clean, large fonts that are easy to read. **Make sure your content is clear and readable from the back of our classroom, as we may review some presentations during lecture.** Ensure good color contrast between the text and background.
3. Presentations must be submitted in **.ppt or .pptx format**.
4. Students must submit a single file for grading. Any notes must be included in the PowerPoint file on the notes pages associated with each slide, or as separate backup slides at the end of the file. Do not put your notes in a separate file.
5. The presentation file name must follow the following naming guideline. The name must begin with "**s11\_**", followed by the student's last name (family name), followed by a brief identification of the current topic. An example of a file name for a student named "Joe Smith" with a presentation topic related to the ZigBee protocol would be "**s11\_Smith\_ZigBee.ppt**".
6. The presentation title page must include the subject, the text "Current Topics Presentation", the student's name, the course number (ECEN 4613 or ECEN 5613), and the submission date.
7. Diagrams, pictures, and figures can make your presentation more interesting and informative.
8. **Plagiarism will not be tolerated.** Copying material from the web or from documents and submitting it for this assignment without giving credit is plagiarism. Figures may be borrowed from the web or from documents, provided that credit for each figure is clearly given in the file (e.g. "Fig. 3 from ABC Company datasheet XYZ, available from <http://www.abccompany.com/datasheets/>"). Windows or other programs can capture pictures and figures from documents/sites on the web for inclusion in your presentation. In order to maximize the quality of any captured figure, make sure the figure is large on the screen before you capture it. If you capture a small figure and then try to enlarge it in PowerPoint, the figure will have poor resolution.
9. Any schematics, labels, and graphics must be large enough and clear enough to be read easily.
10. URLs for web sites containing relevant articles, data sheets, application notes, and/or other specifications must be listed in the presentation. **At least 5 relevant and useful URLs are required.** Including 7 or more useful URLs will exceed expectations. A URL for a high level article that mentions the technology but provides no low level technology details is considered "not useful".
11. Your prioritized list of 5 or more topics must be included as a page in your presentation file.
12. Company confidential information must not be included in the presentations, since this assignment may be viewed by a wide population, and may be used by the instructor in future presentations.

## **Topic Selection Resources**

In order to research your topics, you might consider using the following resources:

- <http://www.edn.com>, <http://www.elecdesign.com>, <http://www.eetimes.com>, <http://www.circuitcellar.com>, <http://www.embedded.com>, <http://www.mil-embedded.com>, <http://www.embedded-computing.com>, <http://www.ddj.com>, <http://www.esconline.com>, <http://www.sigcon.com>, <http://www.portabledesign.com/>, <http://www.ieee.org/>, <http://www.popsci.com/>, IC device manufacturer application notes
- <http://www.smps.us/standards.html>
- <http://standards.nasa.gov/>, <http://standards.nasa.gov/documents/nasa>
- <http://standards.ieee.org/>
- <http://www.jedec.org/>
- <http://www.iso.org/iso/home.htm>
- <http://www.t13.org/>
- <http://www.t10.org/>
- <http://www.ansi.org/>
- <http://www.incits.org/>
- <http://www.itic.org/>
- <http://grouper.ieee.org/groups/emc/emc/>
- <http://www.iec.ch/>
- [http://leadfree.ipc.org/RoHS\\_3-4.asp](http://leadfree.ipc.org/RoHS_3-4.asp)
- [http://www.dsp.dla.mil/APP\\_UIIL/SpecsAndStandards.aspx](http://www.dsp.dla.mil/APP_UIIL/SpecsAndStandards.aspx)
- [http://en.wikipedia.org/wiki/List\\_of\\_notable\\_software\\_bugs](http://en.wikipedia.org/wiki/List_of_notable_software_bugs)
- <http://www5.in.tum.de/~huckle/bugse.html#WWW>
- Others