**COMPUTER ENGINEERING AND COMPUTER SCIENCE**

**UNIVERSITY OF LOUISVILLE**

**LOUISVILLE, KENTUCKY, 40292**

**CECS 550 SOFTWARE ENGINEERING Spring 2017**

**Homework 1**

**Due Feb 2nd 2017**

**Jan 12th Team meeting task:**

1. *Form a team of 3-6 teammates*
2. *Take a picture of the team with each member’s name to be included in this document*
3. *Have a couple of sentences to introduce each member’s background and previous software engineering experiences*
4. *Discuss and prepare the following items (Task 1 – Task 5)*

**Task 1: Term Project**

1. Describe your project and goal in lay language (about half page)
2. Prepare the Systems Requirements Document as per the IEEE Standards [For example check the textbook. There is a template for SRS in Blackboard].
3. Classify requirements according to priorities, criticalities, and other such criteria as appropriate.
4. Number the requirements for tracking throughout the Software Development Cycle.
5. Identify interacting requirements, through dependencies. A table or matrix of dependency is the best approach for documenting these. From this matrix, develop measures for requirements

**Task 2: Team Structure**

1. Document a team organization plan, indicating areas of responsibilities and specific skills.
2. Based on this plan, identify software processes to be managed and how these will be done.
3. Think of contingencies and how you can continue the project.
4. Read the Chapter on Project Management and identify metrics for product and process relevant to your scheme. Address both tracking during development and at release. (These could be revised later. You will need to use these in the project.)

**Task 3: Project Investigation**

Use the Google Scholar, IEEE Explore or ACM digital library, and possibly other sources to find projects similar to the one you are planning. Narrow these to key ones and discuss their merits and demerits, in a table format. Use this information in the next task.

Here are some sites you can visit to get ideas:

1. http://tdwi.org/microsites/solutionsgateway/ibm/ibm.aspx
2. http://score-contest.org/
3. acm.org and ieee.org

**Task 4: Initial Estimation**

1. Outline an Initial Development Plan of major software phases as you understand at this stage. This plan should allocate responsibilities and tasks. Do understand that you have an opportunity later to tweak this plan in response to your design and architecture, when you freeze the same for the development life cycle.
2. Based on this plan schedule, determine the total effort in hours each of you expect to put in for your project. This will be the initial estimate. In the next homework you will calculate this effort based on the design document. The difference will give you a basis for forming estimates. At the end of the semester, you will match these with the actual effort, obtained from your logs.

**Task 5. Tools and Resources Assessment**

Identify tools and resources needed for the project.

1. Note the merits and shortcomings of tool candidates and the made choice.
2. List the resources you project will need to use and contact CECS IT personnel for availability.