CST8225 Software Requirements Specifications and Analysis

**System Engineering Assignment (group)**

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| **Date Issued:** | **January 2nd 2012** |
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| **Interview Dates:** | To be arranged with team and Professor |
| **Due Date:** | Interview by January 20th 2012  Submission to Professor directly by Noon on Monday January 23rd 2012 |
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# Objective

The objective of this assignment is to provide you with an opportunity to practice, to demonstrate, and to be evaluated on your understanding and application of Software Engineering as it applies to the initial stage of a small project. To assist you in accomplishing this objective, you will be provided with the following:

* A project sheet provided by the client (check for this on Blackboard when advised.)
* A scheduled meeting with the client, with accompanying instructions
* A copy of Letter of Transmittal and Preliminary Investigation Document Template (on Blackboard)
* Supporting material for the assignment (on Blackboard)
* Supporting lectures

In addition to the above, this assignment will provide you with the opportunity to achieve the following:

* To apply the principles of Software Engineering
* To practise your written and oral communication skills
* To practise your problem solving techniques
* To practise your ability to accurately follow instructions
* To enhance your project group's team dynamics
* To provide you with a System Engineering "dry-run" in preparation for your "real" project that you will commence this semester for CST8160 Project
* To provide you with the opportunity of producing a Letter of Transmittal and Preliminary Investigation Document for a small project

# Instructions

This assignment is worth 5% of the Practical Portion of your CST8225 mark.

**Project Worksheets and Binders**

This assignment will **not** use your “real” project’s electronically-produced worksheets or the actual project binder. Rather, students will create separate electronically-produced individual worksheets and the project leader will create a separate electronically-produced project worksheet. All of these worksheets will be printed and placed in a three-ring binder, along with all of the assignment’s rough work, and submitted with the other required submissions by the due date. Clearly identify each student’s project worksheet and the project worksheet in the binder. All other instructions contained in the Standards for Worksheets, Binders, and Gantt Charts document on Blackboard are applicable for this assignment.

Although all worksheets will be electronically-produced for this course and CST8235 IAD course, students must be prepared to record notes during each client-sponsored meeting, and each project group meeting.

Worksheets should contain information from well before the client interview date, as there is a considerable amount of preparation required for this assignment.

**Lateness and Absenteeism**

If you are late for the scheduled project group meeting with the client as outlined in this document, you can expect a 50% reduction in your mark for this assignment.

If you miss the scheduled project group meeting with the client as outlined in this document, you can expect a 75% reduction in your mark for this assignment. Note, however, that other project group member's marks for this assignment will not be directly affected by this tardiness or absenteeism.

**Participation**

The project group must work together with the project leader to ensure that all assignment work is performed to the highest of quality standards, and that all students have an opportunity to participate in this assignment. Project leaders must formally assign work to other project members, and students who do not actively participate (as determined by an inspection of the assignment worksheets) or who voluntarily withdraw themselves from their project group during this assignment will receive a mark of zero (0) for this assignment. Note that it is imperative that both the assignment project worksheet and the assignment individual worksheets contain a comprehensive record of all work performed for this assignment – if the work is not recorded or verifiable in the worksheets, then for the purpose of evaluation, the work shall be deemed to have not been done. While this particular assignment is not complex in nature, documentation of work performed is paramount – this is your change to receive feedback from your project professor and project advisor before you repeat this process with your “real” project.

**Supporting Material**

After interviewing the client (your project professor playing the role of the client), you must author a *Letter of Transmittal and Preliminary Investigation Document* using the framework provided on Blackboard in the Assignments Folder under the heading “Supporting Material for System Engineering Assignment and Student Project Preliminary Investigation Assignment”, which includes the following:

* a template for the Preliminary Investigation (PI)
* an example of what could be contained in a PI
* an example PI for the Monetary Counting System

The course textbooks and your lecture notes are also a valuable resource for assignment work.

The PIECES Framework for Problem Identification on page 77 of Whitten 7th edition should also prove very useful as a practical framework for your project work.

**Documentation Standards**

The documentation standards presented below amplify those detailed in the template for this assignment, those that you might have encountered in ENL1819T, or that your project group establishes for their documentation.

*Preliminary Investigation* document

* Each page, except the title page and the appendices contains the following:
  + A header that identifies the name of the document (Preliminary Investigation).
  + A footer that contains the page numbers, using a “Page x of y” format, where x is the current page number, and y is the total pages in the document excluding the appendices.
* Each appendix is to commence with an unnumbered separator page, followed by numbered pages that use an "Appendix Number – Current Page Number" format – i.e. "A – 2" would appear on the bottom of the first page after the unnumbered separator page of Appendix A, followed by "A – 3" and so on.

You must also create a project group Documentation Standards document for this assignment that outlines the specific documentation standards your project group used for the creation of your documentation. This standards document must provide the project group with "value add." That is, it must not merely be a repeat of the document templates already provided to you.

# Submission Required

On or before the submission due date/time, the project leader (or someone else from the group) is to deliver:

* + one well-organized three-ring binder with the following contents directly to the project professor:
    1. Signed Letter of Transmittal
    2. Preliminary Investigation document, including its appendices
    3. Project group Documentation Standards document
    4. System Engineering Assignment Marking Guide (to provide you with feedback on your submission)
  + one well-organized three-ring Project binder with the following contents directly to the project advisor
    1. A copy of all appendices (with separator pages); including all Gantt charts submitted as part of the Preliminary Investigation document
    2. All individual assignment project worksheets
    3. Assignment project worksheet
    4. Assignment rough work
    5. Other documents including agendas, minutes, correspondence, research, etc. (See Worksheets\_Binders\_And\_Gantt\_Chart\_Standards.doc)
  + You must also submit a DVD with both sets of documents properly organized

There are no softcopy submission requirements for this assignment. In accordance with the course outline, late assignments will not be accepted for marking, and all members of the project group will receive a mark of zero (0) for this assignment.

# Scheduled Project Group Meetings with Client: To be Determined.

**Read these instructions carefully**

* + The format of the meeting must be structured and formal – your time and the client’s time are precious – send the client a professionally prepared, formal agenda at least 48 hours in advance of the meeting in order to (hopefully) maximize the exchange of information
  + The meeting will take place in T128 during your lab period which is the Monday period.
  + The meeting will be limited to 30 minutes 25 minutes for the project group and the last 5 minutes for a debriefing. The project group is responsible for managing the time with the client.
  + The meeting will occur in the room T128 the Project Conference Room – there will be only one project group in the room at any one time.
  + Be at least five minutes early for your meeting – wait outside until the project professor invites you into the room, promptly begin the meeting.
  + As with your "real" initial meeting for your "real" project, you should assume that you have never met the client.
  + Each member of the project group must ask the client questions, and be prepared to answer questions pertaining to Software Engineering.
  + Email the client professionally prepared, formal minutes of the meeting within 24 hours of the meeting. Be prepared to receive feedback from the client, if warranted.

**Notes**:

If you are not scheduled for a meeting during a specific period, then you may use the time to work on other CST8225 course material, but in your regular lab or lecture room.

# Assessment

The following marking guide will be used to assess this assignment.

**Project Group Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**System Engineering Assignment – Marking Guide**

***Project Charter***  /10

***Meeting Agenda*** /5

***Letter of Transmittal Document*** /10

***Preliminary Investigation Document***

Preamble /10

* Introduction
* Purpose of Project
* Audience

Project Scope, Constraints and Recommendations /10

Technical Report Format and Contents /10

* Title Page
* Table of Contents
* Contact Information
* Page Numbering

Gantt charts ***(Project Advisor marks this)*** /15

***Project Worksheet, Individual Worksheets, Assignment Rough Work (Project Advisor marks this)*** /15

***Project Group Documentation Standards Document*** /10

***Meeting Minutes*** /5

Total Marks /100

-Reductions /100

Normalized Mark (5%) /5

**Notes:**

* + - 1. missing documents (including Agendas, Minutes, Gantt Charts and so on) result in a zero (0) for that portion of the assignment, plus an additional 50% reduction of assignment mark – i.e. if you decide not to do the Letter of Transmittal because it is only worth 10% of the mark, then you will receive 0/10 for the Letter of Transmittal, plus your Normalized Mark will be reduced by 50%.
      2. A missing Individual Worksheet submission will result in a mark of zero (0) for this assignment for the specific student.

Project Professor’s Comments: