George Mason University
School of Information Technology and Engineering
Department of Systems Engineering and Operations Research

SYLLABUS
SYST 510 - Systems Definition and Cost Modeling
Fall 2010
Tuesday 7:20pm to 10:00 pm - Location: Engineering Building 1204

Professor:	Dr. Stephen Stephenson
Assignment Submission:	Blackboard and Elluminate usage is required in the class; instructions are below.
Work Phone:	(703) 728-6798 (with voice mail)
FAX:	(703) 728-6798
E-mail:	Stephen_stephenson@dell.com; sstephe3@gmu.edu
Office:	SEOR Department
Office Hours:	By appointment
Course Description:	During this course, the Systems Definition phase of the Systems Development Life Cycle will be explored. This phase of the systems engineering effort includes such activities as requirement elicitation, problem analysis, system specification, and system cost estimation. Lectures concerning these topics will be given by the instructor and will be supported by the listed texts. Students will be tested to ensure understanding of material contained within the lectures and the texts. Additionally, students will gain practical knowledge concerning this subject by participating in a group project to create a System Requirement Specification (SRS) and cost model of the system to be developed.
Course Hours:	Tuesdays 7:20 pm to 10:00 pm GMU: Engineering Building - Room 1204
Text:	System Requirements Analysis, Jeffrey O. Grady; Academic Press (2006); ISBN: 978-0-12-088514-5 A Guide to the Project Management Body of Knowledge: (PMBOK Guide)

Project Management Institute
ISBN: 1-880410-12-5 (No purchase required
– presentation materials will be provided)

Grades: *50% - group project:*
                                               5% SOW;
                                               20% Final Presentation
                                               25% Final Deliverable

                                               50% - individual grades:
                                               25% -Midterm Exam 1
                                               25% - Final Exam 2

Home Page: *http://courses.gmu.edu/* **or** *https://gmu.blackboard.com/webct/logon/35869625001* *(for SYST510 registered students only)*
Public Web Site: *http://www.gmu.edu/departments/seor/syllabi/fall10.htm*

Group Project

The Group Project is the focal point of student effort within this course. Although groups may be able to meet during class time occasionally, the majority of effort toward the group projects will be expended outside of class. There will be groups of several people self-formed during the first meeting of the class. Each group will have two roles: User Group and Requirements Group.
Beginning User Group Activities: As a user, the group will formulate a Statement of Work (SOW) that they will pass to their "mate group". Mate groups will be assigned after the SOW is completed.
Beginning Requirement Group Activities: Each group will exchange their SOW with their assigned mate group. The SOW that they receive from their mate group will form the basis for their role as a Requirements Group. In this role, they will

• study the SOW they have received,

• elicit requirements from the mate group to develop a Systems Requirement Specification (SRS) including problem analysis and system definition models,

• run individual cost models and discuss differences in final presentation

• and document their final SRS

Each group will be required to run a cost model (e.g. COCOMO2, CostXpert, etc.). This run and final analysis of the model will be presented in the final group presentation. Their mate group will be doing these same functions with the SOW they receive.
Ending User Group Activities: After completion of the SRS and cost models, the mate groups will again exchange documents: the SRS. In the User Group role, each group will evaluate the SRS of their mate group. A recommended evaluation strategy will be given to you.
Ending Requirement Group Activities: At the end of the semester, each group will present their work. Groups will be required to hand in their final package to the professor including:

- original annotated SOW they wrote,

- preliminary annotated SRS,

- final SRS,

- group Cost Model comparison, and

- evaluation of Mate Group SRS

In addition, each person in class will be required to do an evaluation of the other members of their group. The format of this is contained in a separate handout. This evaluation will be private. It should be included in a sealed envelope with student signature across flap **as part of the final package**.

Exams

Two exams: The first will cover parts 1 through 8 of Grady's book. The second will be in-class and will cover cost modeling.

The following table is used to convert the final numerical grade to a letter grade:

Grade G	Letter Grade
[95,100]	A
[91,94)	A-
[88,90)	B+
[84,87)	B
[80,83)	B-
[51,79)	C
[0, 50)	F

How To Access Blackboard?

• Go to http://courses.gmu.edu

• Enter Blackboard ID and password:

Students need a Blackboard ID and password to login. Their Blackboard ID is their Mason mail user name (e.g. the Blackboard ID for jdoe@gmu.edu would be jdoe). Logging into Blackboard will require the user to enter the same password required to access their Mason email account.
• If you do not know your Mason mail user name, go to http://mail.gmu.edu and click on "Activating My Account" icon, follow the steps.

• All assignments have due dates and submissions after the due date/time will not be possible, since Blackboard will automatically block "submit my homework" option.

• From time to time, Blackboard works too slowly. Especially from a dial-up internet connection, Blackboard access may not be so efficient all the time; students are encouraged to submit their work earlier than the deadline.

• If you experience any problem while accessing/using Blackboard, please send an e-mail to Dr. Stephenson, sstephe3@gmu.edu

How to Setup and Access Elluminate?

Getting Started With Elluminate

Your class will use Elluminate, a distance learning software package. Your instructor may use this for internet class sessions, office hours, collaborative work groups, and/or other functions. This package will allow you to view slides and other course material, listen to the lecture, ask questions, and interact in other ways with your instructor and classmates. You will also be able to view class session recordings later if you miss a class or want to verify your notes.

You will need an internet connection, ideally broadband although dial-up should work satisfactorily, and a personal computer running Windows, Mac OS X, or Linux using current browser versions. Although you can use your computer speakers and a handheld microphone, your experience (and that of your professor and classmates) will be better if you use a headset with a boom microphone. These are available for under $10 through various retail sources. You can also use a chat function to communicate with the class and instructor. Your instructor may request that you use the chat function instead of the microphone.

You will connect to the class through the class listing on Blackboard (http://courses.gmu.edu – use your gmu.edu email ID and password to connect). Use the Elluminate link on your course page and click on the desired session. Your instructor will tell you which session to use.

 For the best possible experience, please test your connection and configure your computer in advance of your first class session. You can do so by going to http://www.elluminate.com and selecting the "Support" button on the left side of the screen. Please go through at least the first two steps to install any necessary software (typically not necessary) and to run the audio setup wizard to verify the operation and volume levels for your speakers/headset and microphone. Your class interaction will be less stressful if you also take the time to go through the "Online Orientation" and read the "Quick Reference Guide". You will have to agree to accept their security and agree to their license terms.

Answers to common problems with Elluminate, including issues with firewalls, can be found in the Elluminate on-line help system at

http://support.elluminate.com

That page also has a toll-free number if you need further assistance.

Please test the link between Blackboard and Elluminate in advance of your class session by clicking on the Elluminate link in Blackboard. Follow the instructions at the end of these instructions if you see a login box in the top right corner of the Elluminate window or the following error message: **Please retry using the WebCT Proxy tool to restart session.**

Clicking on the Elluminate link will present you with a list of available sessions at that time. Your instructor will tell you which session to select if more than one is available. There is also a link to view class recordings so you can replay a class for review.

If your class is an online section of a concurrent on-campus course, your session may run in "Presentation Mode" by default. This will give you a larger image of the presentation but eliminates the window needed to communicate back to the instructor. To return your screen to the default, click on View, then "Show Presentation" to uncheck it.

Please send email to vsdisted@gmu.edu if you have any questions about this process and someone will contact you. Please note that, in compliance with various educational privacy policies, you must use your gmu.edu email address for all communications.

Resolving problems in Blackboard-Elluminate link:

Error:

'Please retry using the WebCT Proxy tool to restart session' appears when trying to access ELM through WebCT.

Login box appears on Elluminate window within Blackboard

Reason:

Generally this is happening because Cookies are not being allowed to download on your computer.

Resolution:

You must now allow "Third Party Cookies" from the WebCT site for Elluminate:

Changing setting in Internet Explorer:

- From the IE menu bar, select **Tools** , then **Options**.
- Select the **Privacy** tab
- Click on the **Advanced** button.
- Select "**Override automatic cookie handling**." In "Third-party Cookies" column, select either the "**Accept**" or the "**Prompt**" option.. The first will allow all 3$_{rd}$ party cookies without question whereas the latter will ask you each time a 3$_{rd}$ party web site attempts to create a cookie on your system. Select "**Always allow session cookies**."
- Click **OK** to finish Advanced Privacy Settings.
- Click **OK** to finish Internet Options.

Or:

Select Internet Options from the Tools menu. Select the Privacy tab and set the level to anything below "Block All Cookies".

Changing setting in FireFox:
- From the FireFox menu bar, select **Tools** , then **Options**.
- Select the **Privacy** pane.
- In the **Cookies** section, enable "**Accept cookies from sites**"
- Click **OK** to finish Privacy - Cookies.
- Firefox 3 users should also check the box to "allow third party cookies".

For Safari:
- Go to your Safari menu
- Select **Preferences**.
- Select the **Security** tab and select any option for cookies other than "Never".
  There are times when this configuration will not work. If you are unsuccessful in logging in to "Elluminate" after this step, you will need to use another browser

Academic Integrity

GMU is an Honor Code university; please see the University Catalog for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.

GMU EMAIL Accounts

Students must activate their GMU email accounts to receive important University information, including messages related to this class.

Disabilities Statement

If you are a student with a disability and you need academic accommodations, please see me and contact the Disability Resource Center (DRC) at 993-2474. All academic accommodations must be arranged through the DRC.

Other Useful Campus Resources:

WRITING CENTER: A114 Robinson Hall; (703) 993-1200; http://writingcenter.gmu.edu
UNIVERSITY LIBRARIES "Ask a Librarian"
http://library.gmu.edu/mudge/IM/IMRef.html
COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS): (703) 993-2380;
http://caps.gmu.edu
UNIVERSITY POLICIES

The University Catalog, http://catalog.gmu.edu, is the central resource for university policies affecting student, faculty, and staff conduct in university affairs.

CLASS SCHEDULE
Professor will be physically at Fairfax campus for all of the classes.

SCHEDULE

Week 1	Aug. 31	◆Handout syllabus, Honor Code, BLS ◆Groups: Form Groups, Work on SOW ◆Lecture - Introduction
Week 2	Sept. 7	◆Lecture: System Requirements Analysis (Grady Part 1)
Week 3	Sept. 14	◆Lecture: System Requirements Analysis (Grady Part 2) ◆Groups: Work on SOW
Week 4	Sept. 21	◆Lecture: System Requirements Analysis (Grady Part 3) ◆Groups: Work on SOW
Week 5	Sept. 28	◆Lecture: System Requirements Analysis (Grady Parts 3)
Week 6	Oct. 5	◆Lecture: System Requirements Analysis (Grady Parts 3, 4) – Modern Topics ◆**Groups: SOW (via BLS) due to professor** ◆**Groups: presentation of SOW**
Week 7	Oct. 12	◆Lecture: System Requirements Analysis (Grady Part 4) ◆Modern Topics ◆Groups: Requirements elicitation & SRS writing ◆**Groups: SOW returned; Requirements Group assignments given**
Week 8	Oct. 19	◆Lecture: System Requirements Analysis (Grady Part 5) ◆Groups: Requirements elicitation & SRS writing ◆**Bring copy of SOW to class to give to your Requirements Group**
Week 9	Oct .26	◆Lecture: System Requirements Analysis (Grady Part 5) ◆**Groups: SOW due to professor (via BLS)** ◆**Midterm Examination**
Week 10	Nov. 2	◆Lecture: System Requirements Analysis (Grady Part 5) ◆Modern Topics ◆Groups: Return preliminary SRS; SRS revision and cost models ◆Lecture: Integration Management
Week 11	Nov. 9	◆Lecture Cost Modeling ◆Groups: SRS revision and cost models ◆Lecture: Scope and Time Management
Week 12	Nov. 16	◆Lecture: Cost Modeling ◆Modern Topics ◆Lecture: Cost and Quality Management
Week 13	Nov. 23	• Lecture: Cost Modeling • **Groups: Exchange SRS and cost models with Selected User Group;** ◆Lecture: Human Resource and Procurement Management

Week 14	Nov. 30	♦ **ARG presentations of final SRS and cost model** ♦ **SUG submissions of evaluated SRS and cost model for their ARG** ♦ Lecture: Communication Management
Week 15	Dec. 7	♦ **ARG presentations of final SRS and cost model** ♦ **Group Deliverables Due:** to include SOW and valuation for each SRS from Users Group as well as SRS, Cost Model, and Final SRS for each project from Requirements Group ♦ Final exam review
Week 16	Dec. 14 07:30PM -10:15PM	♦ **Final Examination**