

**SYLLABUS**  
**SYST 630 – Systems Engineering Management II**  
**Fall 2014**

**Instructor:** Dr. Rosana R. Stoica

**Assignment Submission:** Blackboard usage is required in the class; instructions are below. *Students must use their MasonLive email account to receive important University information, including messages related to this class. See <http://masonlive.gmu.edu> for more information.*  
In addition, DE students: you will participate in class via Collaborate. The guides for Collaborate may be found at:  
<http://coursesupport.gmu.edu/data/upload/StudentsBb%20CollaborateFull%20Participant%20Guide.pdf>

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**Office Hours:** 2:00 pm to 4:00 pm Wednesdays and by appointment. Collaborate sessions may be created by request for distance education students.

**Course Description:** **630 Systems Engineering Management II (3:3:0)** *Prerequisite: SYST 471 or SYST 530.* Study of more advanced topics in systems engineering management. Seminar style; students are expected to read a number of selections from current literature as well as make presentations and produce papers on engineering management topics. Students will also execute a project involving developing a Systems Engineering Management Plan, a Risk Management Plan, and a Product Assurance Plan for a complex System. Topics include multiproject management (Task Orders, IDIQ, CPAF, CPFF, T&M, and FFP), quality and product assurance programs, independent reviews, risk management, and the impacts of process change on an organization. The class focuses strongly on the practical aspects of various system engineering management techniques and practices on projects, organizations, and personnel. Students will be required to research systems engineering topics and present their findings in class.

**Course Hours:** Wednesday 4:30 pm in Nguyen Engineering Building 2608

**Text:** Information Technology Project Management, Seventh Edition. Kathy Schwalbe, Ph.D., 2014, Course Technology.

**Grades:** 45% - Group Project:

- 15% SEMP
- 10% Risk Management Plan
- 10% Product Assurance Plan
- 10% Final Group Presentation

25% - Research Paper and Class Presentations  
15% - Mid-Term Exam  
15% - Final

**PLEASE NOTE:** *This course has both in-class (IC) and on-line/distance education (DE) students. Both IC and DE students will use Blackboard to communicate with the professor (see below). In addition, DE students will need to use Collaborate for distance access. We will be doing some group work which should be an adventure for both IC and DE students.*

## Group Project

The Group Project is a focal point of student effort within this course. The majority of effort toward the group projects will be expended outside of class, with class time being reserved for lectures, presentations, and reporting on group activities. ***I will set up a Collaborate room for each group to communicate once we form groups.*** Each group will produce three systems engineering planning documents; a Systems Engineering Management Plan (SEMP), a Product Assurance Plan (PAP), and a Risk Management Plan (RMP). Criteria and guidance for these documents will be given in class. ***You must submit materials for presentation by 4 pm before class so that we may share the materials via Collaborate. You will only have to do this when your group presents. Only one person will put the presentation in Blackboard before class. You may also opt to bring a thumb drive and load materials before class.***

## Examinations:

Examinations are comprehensive over the lectures. Examinations will be closed book and will test you on the application of principles learned. ***DE students must have a proctor for their exams. We will discuss this further.***

## Individual Research Paper and Presentations:

Each student will be required to write a paper and give a presentation on a relevant systems management topic. There will be several deliverables for this paper (refer to calendar below). The first deliverable will be a summary of the paper including an annotated outline for the paper in the middle of the semester, you must give the status of your paper. The final deliverable will be due near the end of the semester. The final deliverable must be at least 8 to 10 pages, 1 1/2 spacing, with at least three references. The paper will be graded based on the original contribution of the author. It will not be satisfactory to just document leadership styles, for example. The author would be expected to compare and contrast leadership styles and give an opinion on the subject. ***You must submit materials for presentation by 4 pm before class so that we may share the materials via Collaborate. You may also opt to bring a thumb drive and load materials before class. You will have to do this for the topic presentation, interim status and the final paper presentation.***

## Additional Resources – for Paper

There is a wealth of quality literature available on the subject matter of this course. A few of my favorites are:

- INCOSE Insight (informal and short, but educational articles)
- INCOSE Systems Engineering Journal
- Harvard Business Review (super for the leadership and management portion of the course)
- PMI Project Management Journal
- PMI PM Network
- IEEE Transactions on Systems, Man and Cybernetics
- IEEE Transactions on Engineering Management
- IEEE Engineering Management Review

### **Academic Integrity**

GMU is an Honor Code university; please see the Office for Academic Integrity 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.

### **Writing Intensive Statement**

This course fulfills all/in part the Writing-Intensive requirement in the Systems Engineering undergraduate major. It does so through the five ethic write-ups, bleeding edge paper outline, bleeding edge draft paper, bleeding edge final paper and the seminar review paper. The bleeding edge paper will be completed through a draft/feedback/revision process. The due date for each is below; I will provide comments on each.

### **Disabilities Statement**

If you have a documented learning disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with Office of Disability Services (SUB I, Rm. 4205; 993-2474; <http://ods.gmu.edu>) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.

### **Mason Diversity Statement**

George Mason University promotes a living and learning environment for outstanding growth and productivity among its students, faculty and staff. Through its curriculum, programs, policies, procedures, services and resources, Mason strives to maintain a quality environment for work, study and personal growth.

An emphasis upon diversity and inclusion throughout the campus community is essential to achieve these goals. Diversity is broadly defined to include such characteristics as, but not limited to, race, ethnicity, gender, religion, age, disability, and sexual orientation. Diversity also entails different viewpoints, philosophies, and perspectives. Attention to these aspects of diversity will help promote a culture of inclusion and belonging, and an environment where diverse opinions, backgrounds and practices have the opportunity to be voiced, heard and respected.

The reflection of Mason's commitment to diversity and inclusion goes beyond policies and procedures to focus on behavior at the individual, group and organizational level. The implementation of this commitment to diversity and inclusion is found in all settings, including individual work units and groups, student organizations and groups, and classroom settings; it is also found with the delivery of services and activities, including, but not limited to, curriculum, teaching, events, advising, research, service, and community outreach.

Acknowledging that the attainment of diversity and inclusion are dynamic and continuous processes, and that the larger societal setting has an evolving socio-cultural understanding of diversity and inclusion, Mason seeks to continuously improve its environment. To this end, the University promotes continuous monitoring and self-assessment regarding diversity. The aim is to incorporate diversity and inclusion within the philosophies and actions of the individual, group and organization, and to make improvements as needed.

### **Student Support Resources on Campus**

Resources that you may find helpful may be found at: <http://ctfe.gmu.edu/teaching/student-support-resources-on-campus/>

## How to Access Blackboard?

Go to <https://mymasonportal.gmu.edu>

Login to myMason

- ◆ Enter ID and password

Students need a Mason ID and password to login. Their Mason ID is their Mason mail user name (e.g. the Blackboard ID for [jdoe@gmu.edu](mailto:jdoe@gmu.edu) would be jdoe)

If you do not know your Mason mail user name, go to <http://masonlive.gmu.edu/> and click on “Account Set-up Checklist” icon, follow the steps.

Click on the Course tab

Choose this course from the Course List

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. Stoica, [rstoica@gmu.edu](mailto:rstoica@gmu.edu)

## CLASS SCHEDULE

Week 1>	27 August	<ul style="list-style-type: none"> <li>◆ Review course requirements</li> <li>◆ Lecture: Chapter 1 Introduction to Project Management [48]</li> <li>◆ <b>Group: Form and Organize Groups</b></li> </ul>
Week 2>	3 September	<ul style="list-style-type: none"> <li>◆ Lecture: Chapter 2: The Project Management and Information Technology Context [33]</li> <li>◆ Lecture: Chapter 3 The Project Management Process Groups: A Case Study [32]</li> <li>◆ <b>Group: Give overview of SRS to be used for group project [10 minutes]</b></li> <li>◆ Due: G- SRS - Presentation</li> <li>◆ G-SRS – Paper</li> <li>◆ Due: IN - Information Sheet</li> <li>◆ IN – Honor Code</li> </ul>
Week 3>	10 September	<ul style="list-style-type: none"> <li>◆ Lecture: SE Products [25]</li> <li>◆ Lecture: Systems Engineering Management Plan [15] and example (both document and presentation) [16]</li> <li>◆ Lecture: Chapter 4: Project Integration Management [55]</li> <li>◆ <b>Individual: Give overview of Research Paper [5 min]</b></li> <li>◆ Due: IN - Research Paper Topic - Presentation</li> <li>◆ IN - Research Paper Topic - Paper</li> </ul>
Week 4>	17 September	<ul style="list-style-type: none"> <li>◆ Lecture: Chapter 11, Project Risk Management [60]</li> <li>◆ Lecture: Risk Management Plan [29] and example [25]</li> <li>◆ Lecture: Chapter 5: Project Scope Management [38]</li> <li>◆ <b>Group: Program Management Meeting - Present Interim Status</b></li> <li>◆ Due: G- Interim Status 1 - Presentation</li> </ul>
Week 5>	24 September	<ul style="list-style-type: none"> <li>◆ Lecture: Chapter 6: Project Time Management [61]</li> <li>◆ Lecture: Product Assurance Plan [25] and example [24]</li> </ul>
Week 6>	1 October	<ul style="list-style-type: none"> <li>◆ Lecture: Chapter 7, Project Cost Management [38]</li> <li>◆ <b>Group: Program Management Meeting - Present Interim Status</b></li> <li>◆ Due: G - Interim Status 2 - Presentation</li> </ul>
Week 7>	8 October	<ul style="list-style-type: none"> <li>◆ <b>Exam 1</b></li> </ul>
Week 8>	15 October	<ul style="list-style-type: none"> <li>◆ Lecture: Chapter 8: Project Quality Management [68]</li> <li>◆ Lecture: Chapter 9 Project Human Resource Management [64]</li> <li>◆ <b>Groups: Turn in SEMP</b></li> <li>◆ Due: G- SEMP - Paper</li> <li>◆ <b>Individual: Research Paper: Draft [5 min]</b></li> <li>◆ Due: IN - Research Paper Draft - Presentation</li> <li>◆ IN - Research Paper Draft - Paper</li> </ul>
Week 9>	22 October	<ul style="list-style-type: none"> <li>◆ Lecture: Chapter 10: Project Communications Management [61]</li> <li>◆ <b>Groups: Turn in RMP</b></li> <li>◆ Due: G - RMP - Paper</li> </ul>
Week 10>	29 October	<ul style="list-style-type: none"> <li>◆ Lecture: Chapter 12: Project Procurement Management [45]</li> <li>◆ Lecture: Chapter 13: Project Stakeholder Management [18]</li> <li>◆ <b>Groups: Turn in PAP</b></li> <li>◆ Due: G - PAP - Paper</li> <li>◆ <b>Group: Program Management Meeting - Present Interim Status</b></li> <li>◆ Due: G - Interim Status 3 - Presentation</li> </ul>
Week 11>	5 November	<ul style="list-style-type: none"> <li>◆ <b>Exam 2</b></li> </ul>
Week 12>	12 November	<ul style="list-style-type: none"> <li>◆ <b>Final project presentations</b></li> <li>◆ Due: G - Final Presentation</li> </ul>

Week 13>	19 November	◆ <b>Students Research Paper Presentations</b>
Week 14>	26 November	◆ <b>No class – Happy Thanksgiving Holiday!</b>
Week 15>	3 December	◆ <b>Students Research Paper Presentations</b> ◆ Due: IN – Final Research Paper - Presentation IN – Final Research Paper - Paper