

SYLLABUS

SYST 630 – Systems Engineering Management II

Fall 2017

Professor: Dr. Rochelle Jones

Assignment Blackboard usage is required in the class. Students must use their

Submission: MasonLive email account to receive important university information, including messages related to this class. See <http://masonlive.gmu.edu> for more information.

Work Phone: (703) 993-1663 (with voice mail)

FAX: (703) 993-1521

E-mail: rjones42@gmu.edu (preferred method of communication)

Office Hours: Engineering Building – Room 2229: Thursdays 4:00 – 6:00pm and by appointment. For distance learning students: By appointment

Course

Description: *Prerequisite: SYST 471 or SYST 530.* Study of more advanced topics in systems engineering management. Students are expected to read selections from current literature as well as make presentations and produce papers on engineering management topics. Work in groups to create SEMP, RMP and PAP. Focuses strongly on the practical impacts of various system engineering management techniques and practices on projects, organizations, and personnel.

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

40% - Group Project:

- Grades:**
- 10% SEMP
 - 10% Risk Management Plan
 - 10% Product Assurance Plan
 - 10% Final Group Presentation

20% - Research Paper and Class Presentation

15% - Midterm Exam

15% - Final Exam

10% - Homework and Discussion Board Participation

Grades are assigned as follows:

- A= 92 – 100
- B = 84 – 91.9
- C= 76 – 83.9
- D= 68 – 75.9
- F= 0 – 67.9

Course Expectations

1. Proper preparation is expected every week. You are expected to log in to the course each week and complete the assignments and activities on or before the due dates.
2. Students must check the class announcements in Blackboard on a daily basis for course announcements, which may include reminders, revisions, and updates.
3. It is expected that you will familiarize yourself with and adhere to the George Mason University Honor Code. Student members of the Mason community pledge not to cheat, plagiarize, steal, and/or lie in matters related to academic work. Students must adhere to the guidelines of the Honor Code [See <http://oai.gmu.edu/>]
4. It is essential to communicate any questions or problems to me promptly.

Learning Outcomes

At the end of this course, students will be able to:

1. Describe the purpose of project management in the systems engineering environment
2. Understand the purpose of the Systems Engineering Plan, the Risk Management Plan and the Product Assurance Plan in systems engineering
3. Create a Systems Engineering Plan, Risk Management Plan and Product Assurance Plan for a given Statement of Work

Exams

Closed book, closed notes, closed neighbor. Distance learning students must obtain a proctor for the exam. Proctoring materials may be found in Blackboard in “Proctoring Materials” to validate proctors and verify the taking of the exam.

Group Deliverables

The Group Project is the focal point of student group effort within this course. For distance learning students, Virtual Work Rooms will be set up in Blackboard for groups to meet. Each group will be expected to produce three systems engineering planning documents:

- Systems Engineering Management Plan (SEMP)
- Product Assurance Plan (PAP)
- Risk Management Plan (RMP)

The System Requirement Specification (SRS) for the system from which the groups will be writing the plans is the SRS they wrote for SYST510. The group will need to agree on which SRS they would like to use since the members of the group were probably not in the same group in SYST510. The group must only choose one SRS for the group.

Criteria and guidance for these documents will be reviewed. Example of the three plans may be found in the Student Resource Content area in Blackboard. For distance learning students, each group will be responsible to create a video presentation of their plans. Materials used in the presentation and the written plans should be submitted in Blackboard by **ONE** member of the group. In addition, the groups will be expected to meet and then upload status reports into Blackboard during the semester. Due dates are in the class schedule.

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 written summary of the paper including an annotated outline. The second deliverable will be a written status update in the middle of the semester. The final deliverable will be both a presentation and a written paper 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 in Blackboard in the Assignment section.

Additional Resources – for Paper

There is a wealth of quality literature available on the subject matter of this course. There is a library resource, Theresa Calcagno, who is available to help with references. Her email is: tcalcagn@gmu.edu. Some potential references:

- 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

Note that there are three main bodies of knowledge that intersect in this course: systems engineering (INCOSE, IEEE), leadership and management (Harvard Business Review), and project management (PMI).

For Distance Learning Students

Online Learning Community

This online course is taught via Blackboard Courses (log into <http://mymason.gmu.edu>, select the Courses Tab, and the course can be found in the Course List). This course is offered completely online.

In our online learning community, we must be respectful of one another. Please be aware that innocent remarks can be easily misconstrued. Sarcasm and humor can be easily taken out of context. When communicating, please be positive and diplomatic. I encourage you to learn more about Netiquette. The guides for Collaborate may be found at:

[http://coursessupport.gmu.edu/data/upload/StudentsBb%20CollaborateFull%20Participant%20 Guide.pdf](http://coursessupport.gmu.edu/data/upload/StudentsBb%20CollaborateFull%20Participant%20Guide.pdf)

Technology Requirements

For a brief introduction to some of the services the Volgenau School of Engineering offers to our students, please review:

<http://labs.vse.gmu.edu/uploads/FacultyFAQ/StudentWelcome.pdf>

The technology requirements for this online course are listed below:

Hardware: You will need access to a Windows or Macintosh computer with at least 2 GB of RAM and to a fast, reliable broadband Internet connection (e.g., cable, DSL). For optimum visibility of course material, the recommended computer monitor and laptop screen size is 13-inches or larger. You will need computer speakers or headphones to listen to recorded content. A headset microphone is recommended for live audio sessions using course tools like Blackboard Collaborate. For the amount of computer hard disk space required to take an online course, consider and allow for the space needed to: 1) install the required and recommended software and, 2) save your course assignments. For hardware and software purchases, visit Patriot Computers.

Software - Microsoft downloads: This course uses Microsoft software available at no charge through the Microsoft DreamSpark program. You should have received notification of your access to this program when you first registered for a course in the Volgenau School of Engineering. If you can't find that notification email, please read the DreamSpark FAQ on: <http://labs.vse.gmu.edu> for instructions on activating your account or resetting your password.

Software - Windows software on Macs: Microsoft and many other software developers do not make Mac versions of many software titles. If you have a Macintosh computer on which you want to install software written for Windows, you will have to use Boot Camp or a virtual machine product and then install Windows. VMWare Fusion (a virtual machine host for the Mac) and Windows are available at no charge through your enrollment in Volgenau School courses. Instructions for obtaining the software are in the Microsoft DreamSpark & VMWare FAQs on: <http://labs.vse.gmu.edu>. There are some hints for Mac users on using Microsoft Windows in the FAQs.

Web browser (See Blackboard Support for supported web browsers)
Blackboard Courses (Log into <http://mymason.gmu.edu>, select the Courses Tab)
Blackboard Collaborate (select from the course menu)
Adobe Acrobat Reader (free download)
Flash Player (free download)
Microsoft Office (purchase)

Note: If you are using an employer-provided computer or corporate office for class attendance, please verify with your systems administrators that you will be able to install the necessary applications and that system or corporate firewalls do not block access to any sites or media types.

Academic Integrity

The Honor Code will be read and signed by all students the first week of class and submitted in Blackboard. The Honor Code will also be the first page of the exam and must be signed before taking the exam.

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.

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.

MasonLive/Email (GMU Email)

Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account. [See <https://masonlivelogin.gmu.edu/login>]

Patriot Pass

Once you sign up for your Patriot Pass, your passwords will be synchronized, and you will use your Patriot Pass username and password to log in to the following systems: Blackboard, University Libraries, MasonLive, myMason, Patriot Web, Virtual Computing Lab, and WEMS. [See <https://password.gmu.edu/index.jsp>].

University Policies

Students must follow the university policies. [See <http://universitypolicy.gmu.edu>]. Responsible Use of Computing Students must follow the university policy for Responsible Use of Computing. [See <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing>]. University Calendar Students must follow the university policies. [See <http://registrar.gmu.edu/calendars>].

University Libraries University

The Mason library provides resources for distance students [See <http://library.gmu.edu/distance>]

Writing Center

The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing. [See <http://writingcenter.gmu.edu>]. You can now sign up for an Online Writing Lab (OWL) session just like you sign up for a face-to-face session in the Writing Center, which means YOU set the date and time of the appointment! Learn more about the Online Writing Lab (OWL) (found under Online Tutoring).

Counseling and Psychological Services

The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu>]. Family Educational Rights and Privacy Act (FERPA) The Family Educational Rights and Privacy Act of 1974 (FERPA), also known as the "Buckley Amendment," is a federal law that gives protection to student educational records and provides students with certain rights. [See <http://registrar.gmu.edu/privacy>].

Student Support Resources on Campus

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

CLASS SCHEDULE

Week 1>	30 August	<ul style="list-style-type: none"> • Review syllabus and course requirements • Lecture: Chapter 1: Introduction to Project Management • Form and Organize Student Groups
Week 2>	6 September	<ul style="list-style-type: none"> • Lecture: Chapter 2: The Project Management and Information Technology Context • Lecture: Chapter 3: The Project Management Process Groups: A Case Study • Groups: DUE - Give overview of SRS to be used for group project [10 minutes]
Week 3>	13 September	<ul style="list-style-type: none"> • Lecture: SE Products • Lecture: Systems Engineering Management Plan and Example (both document and presentation) • Lecture: Chapter 4: Project Integration Management • Individual: DUE - Give overview of Research Paper Topic [5 min]
Week 4>	20 September	<ul style="list-style-type: none"> • Lecture: Chapter 11: Project Risk Management • Lecture: Risk Management Plan and Example (both document and presentation) • Group: DUE - Present Interim Status
Week 5>	27 September	<ul style="list-style-type: none"> • Lecture: Chapter 5: Project Scope Management • Lecture: Chapter 6: Project Time Management • Lecture: Product Assurance Plan and Example (both document and presentation)
Week 6>	4 October	<ul style="list-style-type: none"> • Lecture: Chapter 7: Project Cost Management
Week 7>	11 October	<ul style="list-style-type: none"> • MIDTERM EXAM
Week 8>	18 October	<ul style="list-style-type: none"> • Lecture: Chapter 8: Project Quality Management • Lecture: Chapter 9: Project Human Resource Management • Individual: DUE - Research Paper Draft Document and Presentation
Week 9>	25 October	<ul style="list-style-type: none"> • Lecture: Chapter 10: Project Communications Management • Groups: DUE - Submit SEMP
Week 10>	1 November	<ul style="list-style-type: none"> • Lecture: Change and Configuration Management • Groups: DUE – Submit RMP
Week 11>	8 November	<ul style="list-style-type: none"> • Lecture: Chapter 13: Project Stakeholder Management
Week 12>	15 November	<ul style="list-style-type: none"> • Lecture: Chapter 12: Project Procurement Management • Groups: DUE – Submit PAP
Week 13>	22 November	<ul style="list-style-type: none"> • TBD
Week 14>	29 November	<ul style="list-style-type: none"> • Individual: DUE - Student Research Paper and Paper Presentation
Week 15>	6 December	<ul style="list-style-type: none"> • Groups: DUE - Final Project Presentation
Week 16>	13 December	<ul style="list-style-type: none"> • FINAL EXAM