George Mason University
School of Information Technology and Engineering

Rev. 27Dec11

SYST 371 Systems Engineering Management

(3 credit hours, 40 hours of instruction)

Instructor: Dr Jeffrey E. Humphrey (email: humphreyje@aol.com, phone: 703-473-2146, pager 800-209-2390)
Lecture: Mondays, 4:30-7:10PM, Room Enterprise Hall Rm 174
Office Hours: Immediately after class or by arrangement

Prerequisite: SYST 210; corequisite: SYST 330

Course description: Study of basics of systems engineering management. Includes engineering economics, planning, organizing, staffing, monitoring, and controlling process of designing, developing, and producing system to meet stated need in effective and efficient manner. Discussions include management tools, processes, and procedures, including various engineering documentation templates, managerial processes, and dealing with personnel issues. Students will also gain an understanding of the importance and responsibilities of ethics in engineering. The course will also discuss the importance of long term continuing education for the engineer.

Course Text: Mantel, Meredith, Shafer, and Sutton, "Project Management in Practice, 4rd Ed. 2011
You may need some access to a PC (not a Mac) to load and use Crystal Ball software.

Semester Schedule: For the first ~ 2/3 of the class the students will individually demonstrate skills with various systems engineering and management tools/concepts. The last ~1/3 of the semester is primarily focused on a group project – preparing an engineering proposal. Please read chapters before they are discussed in class. Students will lead discussion of one homework problem each during the semester.

Week 1, 23Jan - Review syllabus, introduce instructor and students, explain goals of the course, discuss ethics, the need for continuing education.
Assignment: Take Myers Briggs at http://www.humanmetrics.com/cgi-win/JTypes1.htm bring printout (due in class 30Jan)
Week 2, 30Jan - Text Chapter 1 The World of a PM
Assignments: HW Chapter 1 problems 18, 21, 23 (due next class)
Week 3, 6Feb - Text Chapter 2 Manager, Organization, and Team
Assignment: HW Chapter 2 – problems 11, 12, 13, 15 (due next class)
Week 4, 13Feb – QUIZ 1 Chapters 1, 2, ethics, continuing education, in class, closed book and notes
Assignment: None
Week 5, 20Feb - Text Chapter 3 Planning the Project (WBS)
Assignment: HW Chapter 3 problems – WBS Exercise (due next class)
Week 6, 27Feb - Text Chapter 4 Budgeting
Assignment: HW Chapter 4 problems 13, 15 (due next class)
Week 7, 6Mar - Text Chapter 5 Scheduling
Assignment: HW Chapter 5 problems 25, 26 (AON only), 28 (due next class)
Week 8, 13Mar, Spring Break, no class
Assignment: Have fun
Week 9, 21Mar – QUIZ 2 Chapters 3, 4 & 5 in class, closed book and notes
Assignment: None
Start team project proposal (due Final exam), team formation starts (final teams due 3Apr), review project assignment
Week 10, 28Mar - Text Chapter 6 Allocating Resources
Assignment: HW Chapter 6 problems 21 a-e, CASE St Dismis (due next class)
Week 11, 3Apr - Text Chapter 7 Monitoring and Controlling Project
Assignment: HW Chapter 7 problem 26, CASE Palmstar (due next class)
Week 12, 10Apr - Text Chapter 8 Evaluating and Terminating the Project
Assignment: HW Chapter 8 - CASE Datatech (due next class)

Week 13, 17Apr – Requirements/Specifications Review (material will be handed out in class)
Assignment: Team status review
Week 14, 24Apr – Quiz 3 Chapters 6, 7, 8, & requirement/specifications, in class, closed book
Assignment: Informal team project summary status only
Week 15, 1May - Project status briefings
Assignment: Present project status
Week 16, May 11-18 (Final Exam Period) – Final Exam: Team Presentations*, team self evals
* Actual presentation sequence will be by random draw

Grading
20% Quiz 1 (in-class)
25% Quiz 2 (in-class)
22.5% Quiz 3 (in-class)
20% Final Project Proposal Presentation (and status, presentations)
2.5% Team self evaluations
10% Class Participation, Attendance, Homework
100%

Overall Grade Scale (in % of total available points):

A+	99-100
A	92-98.9
A-	90-91.9
B+	88-89.9
B	82-87.9
B-	80-81.9
C+	78-79.9
C	72-77.9
C-	70-71.9
D+	68-69.9
D	62-67.9
D-	60-61.9
F	<60

Further details:

One Homework Individual Presentation:
Lead the class solving one homework problem during the semester. You are to have solved the problem before class and be ready to present a cogent discussion (using whiteboard or audio visual equipment) of the solution process.

Engineering Proposal Group Project:
Group will form and develop a proposal to order and install solar equipment on a houses in a yet to be built subdivision of 250 homes. The homes are to be built this summer and the contractor needs help designing and installing solar equipment on homes.