ISE 515: ENGINEERING PROJECT MANAGEMENT (31505)

Spring 2017, Monday and Wednesday 12:30pm – 1:50pm (VKC 201)

Instructor: Dr. Kim Peters Phone: 213-740-0867 (during office hours)

Office: GER 309A E-mail: kypeters@usc.edu

Office Hours: Monday and Wednesday 2:00pm – 3:00pm or by appointment

TA: Le Zhang, Priank Ravichandar Phone: TBA

Office: 309 E-mail: lez@usc.edu, pravicha@usc.edu

Office Hours: TBA

Course Description (Expanded)

Increasingly, businesses regularly use project management to accomplish unique outcomes with limited resources under critical time constraints. This course addresses project management from a management perspective, the project manager in particular with a basic exposure to the tasks and challenges which affect most projects. Imagine managing globally distributed teams while adhering to scope, budget, time constraints while balancing project risks and rigorous quality demands. This course will provide you the fundamental management tools as well as the behavioral skills to systematically manage projects for all types of projects, be they public, business, engineering, information systems, or other.

The course objectives are:

- Acquire and fine-tune the skills and techniques for the four phases in the life cycle of a typical project: initiating, planning, executing and closing
- Gain an understanding of essential principles associated with effective project management and how to apply these principles in the day-to-day business environment
- Familiarize yourself with commonly available computer software tools
- Understand and apply methods for solving and avoiding common difficulties associated with project management

The subject matter will be covered with lectures, discussions, case studies, reading the text, individual research, and the preparation of a comprehensive project management plan in a team environment.

Course Materials

Required Text:

<u>Project Management: A Managerial Approach</u>, 9th Edition, Meredith, Jack R. and Mantel Jr., Samuel J., ISBN: 13 9781118947029

Reference Material(s):

- A Guide to the Project management Body of Knowledge, 5th Edition, (PMBOK Guides) [paperback],
 Project Management Institute (author), ISBN: 13 9781935589679
- <u>Project Management Toolbox: tools and techniques for the practicing project manager</u>, Dragan Z. Milosevic, ISBN: 0-471-20822-1
- <u>Project Management Tools and Techniques, A Practical Guide</u>, Carstens, Richardson and Smith, Publisher: CRC Press; ISBN: 978-1-4665-1562-8
- Quantitative Methods in Project Management, John C. Goodpasture. Available at USC's bookstore.

Note: Students are not required to purchase the reference materials. Instructor will provide all the pertinent reference documents for the course.

<u>Software: Microsoft ® Project:</u> The course will utilize *Microsoft Project* software.

- Copies of Microsoft ® Project are available on the ISE laboratory computers in GER 309 (M-F 8 to 5).
- It may be downloaded @ http://viterbi.usc.edu/resources/vit/services/dreamspark.htm.
- A 60-day trial of Microsoft ® Project can be downloaded from <u>Microsoft's website</u>.
- Microsoft Excel and PowerPoint can be download @ http://itservices.usc.edu/officestudents/.
- Virtual Lab: MyDesktop @ http://viterbi.usc.edu/resources/vit/services/vdi.htm.

Online Access to Materials

The assignments, handouts, lecture notes, team rosters and other class information will be posted on Desire To Learn (D2L, https://courses.uscden.net). All students are expected to be able to access information from the on-line website.

Class Project

The class project consists of a group project where project management skills will be demonstrated and evaluated. Students will be provided with a project where all the elements of project planning are explicit and clearly defined. The class project will be graded based on the class presentation, final report and a 360° team rating. Each project team will maintain a team notebook which contains PM tools to track the project and maintain project configuration management.

Grading

- <u>Exam 1: 20% (individual).</u> The exam 1 (3/1/2017, tentative) will include all the materials covered until 2/27/2017. This date will mark the end of the first part of the course.
- <u>Exam 2: 30% (individual).</u> The exam 2 (4/12/2017, tentative) will be comprehensive of all the course materials, with an emphasis on the second part of the course.
- <u>Assignments: 10% (group).</u> Homework must be turned in at the specified due date or via D2L prior to the beginning of class. No late assignments will be accepted unless an extreme circumstance can be proven.
- <u>"Tool" Presentation: 10% (group).</u> A member(s) of the project team will present their work for each given period.
- Project: 30% (group). The final project report is due on 5/3/2017 (tentative).

40%: Project performance (management quality and performance relative to triple constraint)

20%: Preliminary design review (PDR)

20%: Critical design review (CDR)

20%: 360-degree peer evaluation: creativity, quality, and etc.

Note: <u>Participation/Behavior</u>: Notable consideration will be given for class participation and behavior. Extra points may be awarded at the discretion of the instructor for exceptional accomplishments. These can be included but are not limited to exceptional creativity, research, team work, to name a few.

Quality Expectations

All assignments and presentations should be completed with the upmost professionalism. This means that all the assignment, project, papers and other materials must be prepared using a word processor, spreadsheet, PowerPoint or any other relevant computer software (e.g. MS Project).

All work shall have cover page with:

- 1. Your full name
- 2. Your group member names with last names in alphabetical order (group assignments)
- 3. Document title
- 4. Document date
- 5. File name must conform to the following: group# _assignment#.ext (doc, xls. mpp, ppt, etc.)

Presentations should be prepared in PowerPoint and should be delivered in time allotted. If any group is not prepared to present, all members of that group will be adversely affected in grading and evaluation.

Attendance

Regular class attendance is strongly encouraged and recommended. You are responsible for all material presented in the lecture whether you are present or not. Electronic devices such as cell phones, pagers, and alarms should be turned off or set to silent mode throughout class.

Important Dates

January 9	Classes Begin
January 16	Martin Luther King's Birthday
February 20	President's Day
March 1	Exam 1 (tentative)
March 12-19	Spring Recess
April 12	Exam 2 (tentative)
April 28	Classes End
April 29-May 2	Study Days
May 5, 11:00am-1:00pm	Final Project Evaluation
May 12	Commencement

Student Support Systems

- Statement for Students with Disabilities: Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to the professor(s) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.—5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.
- Emergency Services: If an officially declared emergency makes travel to campus infeasible, USC
 Emergency Information at http://emergency.usc.edu will provide safety and other updates, including
 ways in which instruction will be continued by means of D2L, blackboard, teleconferencing, and other
 technology.
- Language Support Systems: USC provides support for students who need help with scholarly writing.
 Students whose primary language is not English should check with the American Language Institute at
 http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international
 graduate students.

Academic Integrity

USC seeks to maintain an optimal learning environment. The Department of Industrial and Systems Engineering adheres to the University's policies and procedures governing academic integrity as described in *Scampus*, the Student Guidebook. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. *Scampus*, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at http://www.usc.edu/student-affairs/SJACS. All students are expected to understand and abide by these principles, as they will be strictly enforced throughout the semester.

Note: This syllabus is subject to change.

USCViterbi School of Engineering

Course Schedule (Note: This schedule is subject to change.)

W	Date	Assignments	Topics	Readings
1	1/9/2017	Asn#1	Introduction	Chapter 1
			Discussion: Why project management	Handouts
2	1/16/2017	Asn#2	Holiday - Martin Luther King's Birthday	Chapter 2
			Part 1: Project Initiation	Handouts
			Project Selection Criteria and Models	
			Discussion: The life cycle of project management	
3	1/23/2017	Asn#3	Part 1: Project Initiation	Chapters 2 & 3
	, -, -		Project Activity and The Project Manager	Handouts
			Discussion: Group project initiation	
4	1/30/2017	Asn#4	Part 1: Project Initiation	Chapters 4 & 5
	_, _ ,		Managing Conflict	Handouts
			Organizational Structure	
			Discussion: MS Project introduction	
5	2/6/2017	Asn#5	Part 2: Project Planning and Scheduling	Chapters 5 & 6
,	2,0,2017	7.511113	Project Activity and Risk Planning	Handouts
			Discussion: WBS activity and PI matrix	Handouts
6	2/13/2017	Asn#6	Part 2: Project Planning and Scheduling	Chapter 6 & 7
U	2/13/2017	ASII#O	Budgeting: Estimating Costs and Risks	Handouts
			Discussion: The process of cost estimation	Handouts
7	2/20/2017	A c n #7	Holiday – President's Day	Chapter 7
7	2/20/2017	Asn#7		Handouts
			Part 2: Project Planning and Scheduling	папиоись
_	2/27/2047		Budgeting: Estimating Costs and Risks	Charten O
8	2/27/2017		Part 2: Project Planning and Scheduling	Chapter 8
			Discussion: Preliminary Design Review	Handouts
_	2/6/2017	DDD Dt	Exam 1	Ch 0 0 0
9	3/6/2017	PDR Report	Part 2: Project Planning and Scheduling	Chapters 8 & 9
			Project Scheduling: Critical Path Method	Handouts
	- / - /		Discussion: PERT network technique	
	3/13/2017		Spring Recess	
10	3/20/2017	Asn#8	Part 3: Project Execution	Chapters 9 & 10
			Project Resource Allocation	Handouts
			Discussion: Earned value analysis	
11	3/27/2017	Asn#9	Part 3: Project Execution	Chapters 10 & 11
			Project Monitoring and Control	Handouts
			Discussion: Inchstones and project control process	
12	4/3/2017	Asn#10	Part 3: Project Execution	Chapters 12 & 13
			Project Auditing	Handouts
			Discussion: Project audit life cycle	
13	4/10/2017		Discussion: Critical Design Review (CDR)	Handouts
			Exam 2	
14	4/17/2017	CDR	Part 4: Project Termination	Handouts
			Discussion: Project closure process	
15	4/24/2017	CDR	Part 4: Project Termination	Handouts
			Discussion: Post project probe	
16	5/1/2017		Study Days	
17	5/5/2017	Project Report	Final Project Evaluation	
-	-, -,	- ,	Discussion: 360-degree evaluation	