USC Marshall School of Business

Project Management
DSO 580
Spring 2016

INSTRUCTOR Professor Murat Bayiz
Bridge Hall, Room 307D
Phone: (213) 740 5618
E-mail: murat.bayiz@marshall.usc.edu

OFFICE HOURS Mondays and Wednesdays: 4:00 pm – 5:00 pm

Course Objective and Description

This course introduces important behavioral skills and analytical tools for managing complex projects across multiple functions. The behavioral skills focus on organizing, planning, and controlling projects and managing teams, risks and resources to produce a desired outcome. The course also covers analytical tools to do quantitative trade-offs and make the best possible decision, help decision making under uncertainty.

We will discuss cases describing successful projects and failures throughout the semester and learn project success factors. In addition to guest speakers, lectures, games and case discussions, tutorials on Excel, simulation software called Crystal Ball for project risk management, and Microsoft Project are integrated in every module of the class.

This course begins with organizational issues in project management and focuses on skills and roles of project leaders and structure of project teams. Then the course moves on to more technical areas and covers project integration, scope, time, and cost management. It will also cover project resource, risk, and procurement management. It will be finalized with controlling, monitoring and terminating projects.

Course Materials

Text Books:

- Core Concepts: Project Management in Practice 5th Edition by Mantel, Meredith, Shafer and Sutton. Wiley, ISBN-13: 978-1118674666 ISBN-10: 1118674669
- Critical Chain by Eliyahu M. Goldratt, The North River Press ISBN 0-88427-153-6

Online Course Reader - Containing cases which can be purchased from Harvard Business Online. To purchase the case, you need to go to https://cb.hbsp.harvard.edu/cbmp/access/43936035 and register / sign in. The website will allow you to purchase the cases using your credit card. There are 6 cases in this online reader, other cases will be provided in class.

Project Simulation Game: Please go to https://cb.hbsp.harvard.edu/cbmp/access/43936267 and sign in to purchase the license. After the purchase, you will have access to the simulation game, which we will play throughout the semester.

Optional Reference:
http://issuu.com/120vc/docs/140611_120vc_pm_guidebook_v_4.0c?e=9764488/10052183

Blackboard Files - Additional articles and notes will be posted on the Blackboard

Software:

- Microsoft Project – IT people will provide instructions to install it on your laptop
- Crystal Ball – I will provide you with installation instructions in the first week
- Project Management Simulation: Scope, Resources, Schedule. Available from the online course reader

GRADING

Your grade in this course will be based on individual class participation, group assignments, individual assignments and tests. I will try to assess your understanding of the tools and concepts covered, your ability to integrate and apply those concepts and your contribution to the learning experience of the class as follows:

Class participation and discussion	7.5%
Case read and prep	5%
Case write-up and presentation	5%
Homework assignments	15%
Mid-term exam	25%
Final exam	35%
Critical chain book report	5%
Simulation debriefing reports	5%

CLASS PARTICIPATION

Class participation counts 7.5% of your course grade. It requires that you do the assigned readings, analyze the cases based on the questions given and participate actively in class. I prefer substantive comments based on good analysis rather than brief, general comments that add little to the discussion and learning. If you are reluctant to talk in class but would like to show your preparation, please provide me with your analysis before class. Be prepared to defend your suggestions or solutions with careful and thoughtful analysis! Useful criteria for measuring effective class participation include:

- Is the student absent too many times? Is the participant a good listener?
- Are the points that are made relevant to the discussion? Are they linked to the comments of others?
- Is there a willingness to participate and bring new ideas?
- Do the comments show evidence of analysis of the topic or the case?
- Do the comments clarify or build upon the important aspects of earlier comments and lead to a clearer statement of the concepts being covered?

I will take attendance on a regular basis. It is not mandatory, but will be considered as a part of your participation score.

CASE READ and PREP

All cases must be read before the class they are to be discussed in (whether a submission is required or not). Each student should sign-up for our class on ForClass using the following link: https://app.forclass.com/enroll/5Q9239. For most readings, there will be several questions posted on this site. Make sure to answer these before coming to class.

GROUP CASE REPORTS

You are required to turn in one complete case analysis. It will be done in a learning team of 4-5 students and your case will be assigned to you after the teams are formed in the third week. Each team will prepare a written report and presentation for the assigned case. The written report should be no more than 5 pages (excluding appendices). Your write-up should recommend a solution. The recommendation should be supported by clear, well thought-out analysis. You will also lead off the discussion for the case that you have been assigned. This will entail a brief (15 minute) presentation of your analysis and recommendations.

The report and presentation should contain the following:

- Brief discussion of the company and its environment
- Brief description of the problems
- Analysis that links the problems to its causes
- Recommendations - short term and long term
- Implementation plan and the risks
- Short-term solutions should be to implement in the sense that they require less effort, time and resources.

Please ensure that the report and presentation deck are well organized with clear section headers for the outline provided above

There are discussion questions in the syllabus. These questions are given to help you focus on the relevant issues. You may consider integrating you answers in your write-up. Do not organize your report in the form of a response to each of these discussion questions.

HOMEWORK ASSIGNMENTS

Homework counts for 15% of your course grade. There will be 7 homework assignments. A typical assignment will consist of 1 or 2 questions related to subject discussed in the previous weeks.

MIDTERM EXAM

It counts for 25% of your course grade. It will be an in class, closed book/notes, closed computer exam on **March 2nd (Wednesday) between 6:30 – 7:50 pm**. One page double sided cheat sheet is allowed. Exam duration is 1 hour 20 minutes.

FINAL EXAM

It counts for 35% of your course grade. It will also be in-class, closed book/notes, closed computer exam. Two pages double sided cheat sheets are allowed. The final exam is cumulative but the emphasis will be on the subjects covered after the mid-term exam. T. According to the USC Final Exam Schedule, the final exam is scheduled for **May 4th (Wednesday) between 7:00 – 9:00 pm**. Please take this into account when scheduling your trips! If there are extenuating circumstances that prevent you from taking an

exam, you must discuss the reason with me before the time of the exam. You will not be given a make-up exam unless you obtain permission from me in advance. In addition, you must be able to document the extenuating circumstance. If you miss the exam due to a medical emergency that can be documented and verified, then a make-up exam will be given. Otherwise, a grade of zero will be given for the missed exam.

CRITICAL CHAIN BOOK REPORT

It counts for 5% your grade. The Critical Chain teaches project leaders how to reduce project development times resulting in early completion within budget and without compromising quality or specifications. You will benefit from this book's techniques of how to remain focused on the few critical areas and how to prevent your attention from being divided among all of the projects tasks and resources. After reading the book, answer the following questions:

- Provide the definitions of critical path and critical chain? How do they differ?
- What are inventory buffers analogous in project management? List kinds of buffers used to manage projects and describe where each of them should be located?
- Describe common practices to estimate the duration of project activities as well as real reasons that cause project delays.
- What are the challenges to resolve resource contention in multiple projects?

This is also a group assignment. The report should be no more than 4 pages.

SIMULATION DEBRIEFING REPORTS

It counts for 5% your grade. There are four debriefing reports. Each report will ask you to address a specific set of questions related to the interactive project management simulation we will be conducting throughout the semester.

NOTICE ON ACADEMIC INTEGRITY

The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student's work as unacceptable and assign a failing mark on the paper.

Academic dishonesty includes: (Faculty Handbook, 1994: 21-22):

- Examination behavior - any use of external assistance during an examination shall be considered academically dishonest unless expressly permitted by the teacher
- Plagiarism - the appropriation and subsequent passing off of another's ideas or words as one's own. If the words or ideas of another are used, acknowledgment of the original source must be made through recognized referencing practices

- Other types of academic dishonesty - submitting a paper written by or obtained from another, using a paper or essay in more than one class without the teacher's express permission, obtaining a copy of an examination in advance without the knowledge and consent of the teacher, changing academic records outside of normal procedures and/or petitions, using another person to complete homework assignments or take-home exams without the knowledge or consent of the teacher

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 me 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.

TENTATIVE DETAILED CLASS SCHEDULE

WEEK 1 – JANUARY 13, 2016

Discussion Topics:

- Course expectations
- Introduction to project management
- "IDEO – Deep Dive" video - IDEO's approach in product development projects
- Roles and skills in projects, project leader and team
- Project organization structures

Reading:

- Chapter 1, pages 1 - 11, Chapter 2, pages 35 - 68
- (Blackboard) How to fail in Project Management
- (Blackboard) Lesson on How not to Build Navy Ship

WEEK 2 – JANUARY 20, 2016

Guest Speaker:

- Jason Scott, CEO/President – 120° Venture Construction, Inc

Discussion Topics:

- Monte Carlo Simulation and Crystal Ball (please bring your laptop to the class and make sure that you have Crystal Ball installed)
- Project evaluation and selection
- Project plan
- Work breakdown structure

Reading:

- Chapter 1, pages 11 - 27, Chapter 3, pages 76 - 97

WEEK 3 – JANUARY 27, 2016

Discussion Topics:

- Project budgeting
- Estimating project times and costs

- Request for proposals
- Microsoft Project (please bring your laptop to the class and make sure that you have Microsoft Project installed)
  - Starting a new project
  - Defining project information
  - Defining tasks and precedence relations

Case Discussion:

- Christopher Columbus, Inc. (Case will be provided in class, questions are in the case)

Reading:

- Chapter 4, pages 112 - 134

Assignment:

- Homework # 1

WEEK 4 – FEBRUARY 3, 2016

Discussion Topics:

- Deterministic project scheduling
- Critical Path Method (CPM)
- Microsoft Project (please bring your laptop to the classroom)
  - Scheduling tasks
  - Finding the critical path

Case Discussion:

- Echelon Inc. (A) (Case will be provided in class, questions are in the case)

Reading:

- Chapter 5, pages 152 - 161

Assignment:

- Homework # 2

WEEK 5 – FEBRUARY 10, 2016

Discussion Topics:

- Probabilistic project scheduling
- Program Evaluation and Review Technique (PERT)
- Merge Event Bias

- Crystal Ball examples on probabilistic project scheduling (please bring your laptop to the classroom)

Case Discussion:

- Echelon Inc. (B) (Case will be provided in class, questions are in the case)

Reading:

- Chapter 5, pages 162 - 188 and Appendix 301 - 309

Assignment:

- Homework # 3

WEEK 6 – FEBRUARY 17, 2016

Guest Speaker:

- Art DeGuzman, Director – PwC

Discussion Topics:

- Resource management
- Resource leveling
- Project Simulation – Scenario A (please bring your laptop to the classroom)

Case Discussion:

- Providian Trust: Tradition and Technology

  Discussion Questions:

  1. How successful do you expect the Access+ project to be?
  2. What are the project's areas of exposure?
  3. What advice would you give Steve Walsh on November 1, 1995?

Reading:

- Chapter 6, pages 200 - 227

Assignment:

- Homework # 4

WEEK 7 – FEBRUARY 24, 2016

Discussion Topics:

- Using linear programming in projects
- NPV optimization
- Microsoft Project (please bring your laptop to the classroom)

  - Defining resources
  - Assigning resources to tasks
  - Resource leveling
- Review for midterm

Assignment:

- Project Simulation Debriefing – Scenario A

WEEK 8 – MARCH 2, 2016

- Mid-term Exam
  - One Double Sided Cheat Sheet
  - Closed books/notes
  - Closed computer
  - 80 minutes

Discussion Topics:

- Project time & cost trade-off analysis
- Excel Solver examples on time & cost trade-off (please bring your laptop to the classroom)

WEEK 9 – MARCH 9, 2016

Discussion Topics:

- Risk management
- Project Simulation – Scenario B

Case Discussion:

- Boeing 767

  Discussion Questions:

  1. How would you describe Boeing's approach to project management? What are its basic elements? Its strengths and weaknesses?
  2. What is your evaluation of the company's parametric estimating technique?
  3. How does Boeing manage risk? (Please consider all of the following: financial risk, market risk, technological risk, and production risk.)
  4. Which method should Boeing use to convert the first 30 767s from three-person to two person cockpits? Why?

Reading:

- Chapter 4, pages 134 - 143

MARCH 16, 2016

No Class – Spring Break!

WEEK 10 – MARCH 23, 2016

Discussion Topics:

- Project Simulation – Scenario D

Case Discussion:

- Airbus3XX: Developing the World's Largest Commercial Jet

  Discussion Questions:

  1. Why is Airbus interested in building the A3XXX? What are the objectives?
  2. How many aircrafts does Airbus need to sell in order to break even on the investment? Is this number greater or less than your estimate of total demand for very large aircraft (VLA) over the next 20 years?
  3. As Boeing, how would you respond to this situation> How does your answer depend on what you think Airbus is likely to do?
  4. Should Airbus commit to build the A3XX? How many orders should Airbus have before committing to develop the plane?

Assignment:

- Homework # 5
- Project Simulation Debriefing – Scenario B

WEEK 11 – MARCH 30, 2016

Discussion Topics:

- Role of contracts in project management
- Critical Chain the concept
- Critical Chain the book

Case Discussion:

- BAE Automated Systems

  Discussion Questions

  1. Evaluate the implementation of the Denver International Airport Baggage-Handling System. What do you believe were the top 3 factors that contributed to the project's failure? Who do you feel is most at fault (Pena, Webb, DiFonso, others)?
  2. What problems occurred during the timeframe when Federico Pena was mayor? Given the constraints he faced when he succeeded Pena in November 1989, what should Mayor Wellington Webb have done differently?

3. As Gene DiFonso, what would you have done differently to avoid the problems faced at the end of the case?
4. How should DiFonso respond to Mayor Webb's decision to impose a $12,000 per day penalty and the requirement that BAE assume the $50 million cost of building a conventional tug-and-cart baggage system?

Reading:

- Chapter 6, pages 227 - 237

Assignment:

- Critical Chain Book Report
- Project Simulation Debriefing – Scenario D

WEEK 12 – APRIL 6, 2016

Discussion Topics:

- New product development

Case Discussion

- Microsoft Office 2000

  Discussion Questions:

  1. What's your assessment of the Office 2000 project? What criteria would you use to judge whether this project is a success?
  2. Critique the process through which Office 2000 was developed. Specifically:
  3. How did the team resolve uncertainty in the early stages of development?
  4. What role did Milestones and Daily Builds play in development?
  5. How has Microsoft's approach to development changed over the last ten years? What factors have driven these changes?
  6. What should Sinofsky do? Be specific in your recommendations.

Assignment:

- Homework # 6

WEEK 13 – APRIL 13, 2016

Discussion Topics:

- Project Simulation – Scenario F
- Portfolio selection and resource allocation
- Microsoft Project (please bring your laptop to the classroom)
  - Structuring master projects
  - Consolidating projects

- Sharing resources

Case discussion:

- Le Petit Chef

  Discussion Questions:
  1. What should Gagne do? Specifically, which project should she fund and why? How should she handle the executive meeting?
  2. What factors explain Le Petit Chef's poor performance? What actions would you recommend to remedy the situation?

WEEK 14 – APRIL 20, 2016

Discussion Topics:

- Project monitoring and control
- Earned value approach
- Microsoft Project (please bring your laptop to the classroom)
  - Saving a baseline and updating the process
  - Doing earned value analysis

Reading:

- Chapter 7, pages 244 - 271

Assignment:

- Project Simulation Debriefing – Scenario F

WEEK 15 – APRIL 27, 2016

Discussion Topics:

- Project audits
- Project termination
- Final review and practice final

Reading:

- Chapter 8, pages 280 - 293

Assignment

- Homework # 7

FINAL EXAM – MAY 4, 2016

- 7:00 pm – 9:00 pm
- Two Double Sided Cheat Sheets
- Closed Notes/Book
- Closed Computer
- Comprehensive