DSO 455 Project Management
Fall 2020

Instructor: Professor Kathy Takayama, PMP, CSM

Office Hours: **Mon** 9:30-10:30 AM, 8:00-9:00 PM; **Wed** 1:30-3:00 PM PDT
See Blackboard for Zoom links, latest updates and to schedule 1:1 time

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COURSE 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.

LEARNING OBJECTIVES

Upon successful completion of this course, students will be able to:

- Describe the required behavioral skills and analytical tools for successfully managing complex projects across multiple functions

- Explain how the role of organizing, planning, and controlling projects and managing teams, risks and resources in producing a desired outcome

- Utilize analytical tools to do quantitative trade-offs in project management

- Utilize analytical tools to help decision making under uncertainty and risk management

- Describe project success factors

- Perform analysis using Excel in project management

- Perform quantitative project risk management analysis using Crystal Ball software

- Perform various analyses using Microsoft Project software

- Describe the organizational issues in project management

- Explain ideal skills and roles of effective project leaders

- Describe the structure of successful project teams

- Analyze the components of project scope, time, and cost management.

- Describe the elements of project resource, risk, and procurement management

- Explain strategies for controlling, monitoring and terminating projects

PREREQUISITE(S):
None

REQUIRED MATERIALS
Text Books:
- Core Concepts: "*Project Management in Practice,*" Sixth Edition, by Mantel, Meredith, Shafer and Sutton. Wiley, ISBN-13: 978-1119385622 ISBN-10: 1119385628
- "*Critical Chain*" by Eliyahu M. Goldratt, The North River Press, ISBN 0-88427-153-6

Online Course Reader:
- Contains cases which can be purchased from Harvard Business School
- To purchase the case, you need to go to https://hbsp.harvard.edu/import/734565 and register / sign in
- The website will allow you to purchase the cases using your credit card
- There are 5 cases in this online reader, other cases will be provided in class

ForClass
- For most case studies and readings, several questions will be posted on ForClass
- Each student should sign-up for our class on ForClass using the following link: https://app.forclass.com/enroll/21U9BQ

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

Project Simulation Game:
- We will play a Project Simulation, that comes from Harvard Business School, throughout the semester
- Please go to https://hbsp.harvard.edu/import/734926 and sign in to purchase the license
- After the purchase, you will have access to the simulation game
- Wait until we meet in class for instructions (do not start the simulation until directed)

Software: Instructions will be provided during lecture
- Microsoft Project
- Crystal Ball
- Excel Solver

USC Technology Support Links
- Zoom information for students
- Blackboard help for students

USC technology rental program
We realize that attending classes online and completing coursework remotely requires access to technology that not all students possess. If you need resources to successfully participate in your classes, such as a laptop or internet hotspot, you may be eligible for the university's equipment rental program. To apply, please submit an application. The Student Basic Needs team will contact all applicants in early August and distribute equipment to eligible applicants prior to the start of the fall semester.

OPTIONAL MATERIALS

- "*PMBOK Guide*" Sixth Edition, Project Management Institute, ISBN-13: 978-1628251845 or ISBN-10: 1628251840

DESCRIPTION AND ASSESSMENT OF ASSIGNMENTS

Participation

Class participation counts 7% of your course grade. It requires that you do the assigned readings, participate actively in class with good questions and comments that contribute to the overall class learning, as well as participating in any interactive activities like polls, and chats. If you are not able to attend the Zoom lecture, be sure to watch the recording PRIOR to the next lecture. Sometimes there will be pop-quizzes that will enable you to earn participation credit even though you were not in the live class.

ForClass - Case Preparation

ForClass contributes 4% to your course grade. All cases must be read before the class they are to be discussed in (whether a submission is required or not). Each student should register for our DSO 455 class on ForClass using the following link: https://app.forclass.com/enroll/21U9BQ. For most readings, there will be several questions posted on this site. Make sure to answer these before coming to class.

Homework Assignments

Assignments count for 15% of your course grade. A typical assignment will consist of 2-3 questions related to subject discussed in the previous weeks. You will submit homework assignment through Blackboard.

Simulation Debriefing Reports

Your debriefing report counts for 4% your grade. There will be several 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.

Group Case Report

You are required to turn in one complete case analysis. It will be done in a learning team of 5-6 students and your case will be assigned to you after the teams are formed in the third week. Each team will prepare only a presentation for the assigned case (no case report is required.)

The presentation should cover the following outline:

- Brief discussion of the company and its environment
- Brief description of the problems
- Analysis that links the problems to its causes
- Short term recommendations
- Long term recommendations
- Implementation plan and the risks

Please ensure that the presentation deck is well organized with clear section headers for the outline provided above. Your group is expected to make a brief (15 minute) presentation of your analysis and recommendations in class. At the completion of your case study, you will be asked to rank your team mates as far as their relative contribution to the case with the intention that this will encourage all team members to do their best to contribute to the team case.

To sign up for a group, go to Blackboard → **Case Groups** and then join any team with less than 6 team members.

Critical Chain Book Report

The group book report 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*.

Midterm Exam

The Midterm counts for 25% of your course grade. It will be open book/notes, online exam which may include questions requiring you demonstrate your knowledge on how to use the tools we discussed in class and on homework. Exam duration is 1 hour 10 minutes.

Final Exam

It counts for 35% of your course grade. It will be an open book/notes online exam which may include questions requiring you demonstrate your skills with the tools we learned about in lecture and on homework. The final exam is cumulative, but the emphasis will be on the subjects covered after the mid-term exam. According to the USC Final Exam Schedule, the final exam is scheduled for **Tuesday, November 24th 8:00 am – 10:00 AM PT**. Please take this into account when scheduling your trips home for the holidays.

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 for me and your academic advisor. 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.

GRADING BREAKDOWN

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:

Assignment	% of Grade
Class Participation	7%
ForClass – Case preparation	4%
Homework Assignments	15%
Simulation Debriefing Reports	4%
Case Report and Presentation (group)	5%
"Critical Chain" Book Report (group)	5%
Midterm Exam	25%
Final Exam	35%
Total	100%

Grading Scale

Course final grades will be determined based on your individual performance relative to your peers in the class.

COURSE-SPECIFIC POLICIES

Attendance

Attendance at all lectures is expected as long as class is between 7AM-10PM in your local time zone. Please let me know at the beginning of the semester if you will not be able to attend due to time zone challenges. As noted in the Participation section above, if you miss class, watch the recording prior to our next class meeting and complete any work such as pop-quizzes to verify your attendance.

Zoom etiquette

Business school is meant to prepare you for the business world. With that in mind, for our class, please keep your classroom attire busines casual. No need for suits and ties, but please always wear a shirt, no athletic caps, no spaghetti straps, no inappropriate expressions on your shirt, etc. Please keep you microphone muted (unless you are speaking) and webcams ON. If you have a reason that you do not want your webcam on, please let me know your specific circumstance so I can accommodate. Let me know if you have questions.

Synchronous session recording notice

Although you are encouraged to attend class "live" if at possible, all synchronous sessions will be recorded and available to students to watch asynchronously several hours after the class ends. Recordings can be found on Blackboard under the "Zoom Meetings" menu link, then by clicking on the Recordings tab at the top of the page.

Sharing of course materials outside of the learning environment

As a reminder, USC has a strict policy that prohibits sharing of any synchronous and asynchronous course content outside of the learning environment: **SCampus Section 11.12(B)** *Distribution or use of notes or recordings based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study is a violation of the USC Student Conduct Code. This includes, but is not limited to, providing materials for distribution by services publishing class notes. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the Internet or via any other media. (See Section C.1 Class Notes Policy).*

DSO 455
Calendar

	Topics/Daily Activities	Assignment Dates
Week 1 8/18, 8/20	Intro to Project Management Chapters 1-2	8/17 – Discussion Post
Week 2 8/25, 8/27	Planning & Guest Speaker Chapters 1-3	8/25 - Case: AtekPC
Week 3 9/1, 9/3	Budgeting Chapter 4	9/3 – Homework #1
Week 4 9/8, 9/10	Scheduling Chapter 5	9/10 - Case: Echelon (A) 9/10 – Homework #2
Week 5 9/15, 9/17	Allocating Resources Chapter 6	9/17 - Case: Echelon (B) 9/17 – Homework #3
Week 6 9/22, 9/24	Project Simulation Midterm Review	9/22 - Case: Echelon (C) 9/24 – Homework #4
Week 7 9/29, 10/1	**MIDTERM** 9/29, 10 AM PT	10/1 – Sim Debrief - Scenario A
Week 8 10/6, 10/8	Monitoring & Controlling Chapter 7	10/6 - "Critical Chain" Book Report
Week 9 10/13, 10/15	Evaluating & Terminating Chapter 8	10/15 - Case: Boeing 10/15 – Homework #5
Week 10 10/20, 10/22	Project Simulation	10/22 - Case: BAE
Week 11 10/27, 10/29	Intro to Agile	10/29 - Case: MS Office 10/29 – Sim Debrief – Scenario B
Week 12 11/3, 11/5	Agile Project Management	11/5 - Case: Le Petit Chef
Week 13 11/10, 11/12	Guest Speakers & Final Review	11/12 – Homework #6
FINAL Tue, Nov 24	**FINAL EXAM** 8-10AM PST	

TENTATIVE COURSE SCHEDULE

WEEK 1, Aug 18 & 20**: Intro to Project Management**

Discussion Topics:
- Course Expectations
- Intro to Project Management
- Roles and skills in projects, project leader and team
- Project organizational structures

Readings & Videos:
- Chapter 1, pages 1-11; Chapter 2, pages 33-66
- (Blackboard) "How to fail in Project Management"
- (Blackboard) Watch "Blackboard Tour" (5 min)
- (Blackboard) Watch "USC Zoom" (5 min)
- Optional Reading: PMI's Pulse of the Profession 2020

Assignment
- [Individual] Submit "Introduction" through Discussion Board by August 17th, 5PM PT

WEEK 2, Aug 25 & 27**: Planning**

Discussion Topics:
- What is a PMO? Why have a PMO?
- Monte Carlo Simulation and Crystal Ball – make sure Crystal Ball is installed on your computer before class on Aug 25
- Project evaluation and selection
- Project plan
- Work Breakdown Structure

8/27 - Guest Speaker:
- Conor Sweeney is the Chief of Staff to the Cofounder and CFO at Box, Inc. (BOX) where he oversees business operations, executive communications, and strategic program management across the Global Finance & Operations organization. Prior to Box, Conor served as Senior Manager, Executive Communications at Walmart eCommerce where he worked directly with the CFO and Chief People Officer leading the development of corporate communications strategies across the HR, Finance, and Mergers & Acquisitions organizations. Sweeney also served in a variety of business operations and

communications roles at Hewlett Packard Enterprise. Conor will be sharing his business experiences with PMO's.

Reading:
- Chapter 1, pages 11-27, Chapter 3, pages 74-101
- TBA – to prepare for guest speaker

Case Discussion (Aug 25)
- (Harvard Course Reader) The AtekPC Project Management Office

Assignment
- [Individual] ForClass submission for AtekPC Project Management Office – due Aug 25

WEEK 3, Sep 1 & 3: **Planning & Budgeting**

Discussion Topics:
- Microsoft Project (asynchronous)
  - Starting a new project
  - Defining Project Information
  - Defining tasks and precedence relations
- Estimating project times and cost
- Request for Proposals

Reading:
- Chapter 4, pages 109-137

Assignment
- [Group of two or one] Homework #1 – due Sep 3

WEEK 4, Sep 8 & 10: **Scheduling**

Discussion Topics:
- Deterministic project scheduling
- Critical Path Method (CPM)
- MS Project (asynchronous)
  - Scheduling
  - Finding Critical Path
- Probabilistic project scheduling
  - Crystal Ball examples

- Program Evaluation and Review Technique (PERT)

Reading:
- Chapter 5, pages 145-172 and Appendix 291-300

Case Discussion (Sep 10)
- (Blackboard) Echelon Inc. (A)

Assignment
- [Individual] ForClass submission for Echelon (A) – due Sep 10
- [Group of two or one] Homework #2 – due Sep 10

WEEK 5, Sep 15 & 17: **Allocating Resources**

Discussion Topics:
- Resource management
- Resource leveling
- MS Project
  - Defining resources
  - Assigning resources to tasks
  - Resource Leveling

Reading:
- Chapter 6, pages 186-225

Case Discussion on Sep 17
- (Blackboard) Echelon (B)

Assignment
- [Individual] ForClass submission for Echelon (B) – due Sep 17
- [Group of two or one] Homework #3 – due Sep 17

WEEK 6, Sep 22 & 24: **Midterm Review**

Discussion Topics:
- Project Simulation Scenario A
- Midterm Review
- Practice Midterm

Case Discussion on Sep 22
- (Blackboard) Echelon (C)

Assignment
- [Individual] ForClass submission for Echelon (C) – due Sep 22
- [Group of two or one] Homework #4 - due Sep 24

WEEK 7, Sep 29 & Oct 1**: MIDTERM**

9/29 - Midterm
- Open book/notes
- 70 minutes
- Blackboard → Midterms & Final → Remote Exams

Discussion
- Using Linear programming in projects
- NPV optimization
- Risk management
- Project time & cost trade-off analysis
  - Excel Solver examples

Reading
- *Reminder: Critical Chain book report is due next week*

Assignment
- [Individual] Project Simulation Debriefing – Scenario A due on Oct 1

WEEK 8, Oct 6 & 8: **Monitoring & Controlling**

Discussion Topics:
- Project monitoring and control
- Earned value approach
- Critical Chain – the concept
- Critical Chain – the book

Reading:
- Chapter 7, pages 234-259

Assignment

- [Case Group] Critical Chain Book Report due Oct 6

WEEK 9, Oct 13 & 15: **Evaluating & Terminating**

Discussion Topics:
- MS Project
  - Saving a baseline an updating the process
  - Earned Value analysis
- Project Audits and Termination

Reading:
- Chapter 8, pages 269-282

Case Study
- (Harvard Course Reader) Boeing – Group Presentations on Oct 15

Assignment
- [Assigned Case Group] Boeing case slide deck due Oct 15
- [Individua] ForClass submission for Boeing due Oct 15
- [Group of two or one] Homework #5 due October 15

WEEK 10, Oct 20 & 22: **Project Simulations**

Discussion Topics:
- Project Simulation Scenario B & C

Case Study
- (Harvard Course Reader) BAE Systems group presentations on Oct 22

Assignment
- [Assigned Case Group] BAE Systems case slide deck due Oct 22
- [Individua] ForClass submission for BAE Systems due Oct 22

WEEK 11, Oct 27 & 29: **Intro to Agile**

Discussion Topics:
- Agile Values
- Agile Principles
- Waterfall vs. Agile
- Agile Frameworks

- Agile Roles

Case Study
- (Harvard Course Reader) MS Office - group presentations on Oct 29

Assignment
- [Assigned Case Group] MS Office case slide deck due Oct 29
- [Individua] ForClass submission for MS Office due Oct 29
- [Individual] Simulation debriefing for Scenario B due Oct 29

WEEK 12, Nov 3 & 5: **Agile Program Management**

Discussion Topics:
- Defining the Product Vision and Roadmap
- Planning Releases and Sprints
- Refining Requirements
- Life in the Day of Agile
- Sprint Reviews
- Releases

Case Study
- (Harvard Course Reader) La Petit Chef - group presentations on Nov 5

Assignment
- [Assigned Case Group] La Petit Chef case slide deck due Nov 5
- [Individua] ForClass submission for La Petit Chef due Nov 5

WEEK 13, Nov 10 & 12: **Guest Speaker & Final Review**

11/10 - Guest Speakers – Agile in Action at In Time Tec
- Anthony Chen – Anthony has spent more than 23 years in Hewlett-Packard and In Time Tec Research and Development labs, blending his business and technical acumen. His considerable experience is complimented by a postgraduate degree in Computer Science as well as an MBA. His work as chief technologist and master program manager has been marked by the creation of products that customers find compelling and businesses find meaningful for their day-to-day activities.
- Rob Tuft - When he came to In Time Tec, Rob was asked to lead an effort to improve the company's software development processes and training. Under his guidance, ITT has

become fully committed to Agile, which has taken the company to new heights. The company's culture of training and learning is actively fostered by leaders such as Rob.

Discussion Topics:
- Final Review
- Practice Final

Assignment
- [Group of two or one] Homework #6 due Nov 12

FINAL EXAM: Tuesday, Nov 24
- 8:00-10:00 AM PT
- Open notes/book
- Comprehensive
- BB→ Midterm & Final → Remote Exams

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards" policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org
Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault
Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) - (213) 740-5086 | Title IX – (213) 821-8298
equity.usc.edu, titleix.usc.edu
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298
usc-advocate.symplicity.com/care_report
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776
dsp.usc.edu
Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Campus Support and Intervention - (213) 821-4710
campussupport.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101
diversity.usc.edu
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call
dps.usc.edu, emergency.usc.edu
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call
dps.usc.edu
Non-emergency assistance or information.