

Fall 2020

## **CS 683-001: Software Project Management**

Samir Padalkar

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## **CS 683: Software Project Management**

Syllabus, Fall 2020

Dr. Samir Padalkar

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Mondays, 2:30pm-5:25pm SYNCNHRONOUS ONLINE

**Office Hours:** ONLINE, EMAIL, ZOOM, WEBEX, CANVAS ...

**TA Office Hours:** TBD

### **CS 683 – Software Project Management**

This course gives the student the necessary background and direct experience to allow her/him to manage software projects. The essence of software engineering is not only to introduce a valuable software product, but to do so economically and competitively. Like any engineering discipline, software engineering depends critically on managerial, economic and organizational considerations. Students learn by forming teams and manage a project and learn how to apply software management techniques, how to select the best fit technique for the project at hand, various software costing techniques including COCOMO and ROI, team organization and management, and various methods of software development including LEAN and Agile.

### **Instructor Availability and Response Time**

Please include cs683 in the Subject: line of any email you send; it will make it easier to manage my emails. I will do the same in emails I send to you. I will check email regularly. If I do not respond to your email within 48hrs (I usually respond within 24 hours or sooner) during the weekdays, please send the email again. If you need to have an online meeting with me, please send me an email / canvas-msg. I will make every effort to post your grades a week after they're due.

### **Learning Outcomes**

- Understand the five process groups of a software project and how to manage them
- Acquire direct, hands-on experience planning and managing a project
- Learn the Project Management Life Cycles (PMLC) of a software project and how to select the best fit for your project: traditional, Agile, Extreme, Emertxe
- Understand how to identify and manage the project stakeholders
- Understand business value and its role in project management
- Lean strategies to prevent and control distressed projects

All course materials, including lecture notes, papers, etc, will be posted on CANVAS. Announcements and notices will also be posted. WHEN IN DOUBT, CHECK CANVAS. CANVAS will be used for online Q&A and for any paper or presentation submissions

## **Textbook**

Robert K. Wysocki, "Effective Project Management Traditional, Agile, Extreme", 7<sup>th</sup> Edition Wiley 2014, ISBN 978-1-118-72916-8, Library of Congress Control Number 2013954088 978-1-118-72916-8

Lists of interesting additional reading will be on the course website.

Papers and articles will also be posted.

## **Grading**

Attendance/Presentation	5%
Midterm	20%
Project	45%
Final	30%

## **Simple rules**

Turn off the toys (phones especially).  
I expect you to behave professionally.  
Speak to me about any issues you have.

## **Ethical Conduct**

**(This should go without saying, people. Seriously.)**

***Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on.***

Cheating during in-class tests or take-home examinations or homework is, of course, illegal and immoral.

The essential quality of the NJIT **University Code on Academic Integrity** is that each student shall demonstrate honesty and integrity in the completion of all assignments and in the participation of the learning process. Adherence to the University Code on Academic Integrity

promotes the level of integrity required within the university and professional communities and assures students that their work is being judged fairly with the work of others.

See <http://www.njit.edu/academics/pdf/academic-integrity-code.pdf>

*Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.** If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at [dos@njit.edu](mailto:dos@njit.edu)*

## Project/Presentation

The class will be divided into 3 person teams.

A topic/project “On-Line Financial Trading System” OR SIMILAR has to be selected by each team. I have uploaded a possible list of projects on CANVAS.

Each team has to ----

- 1) Create Detailed Project Requirements
- 2) Create Detailed Project Plan (Work Breakdown, Resource & Time Estimation, Project Network Diagram).
- 3) Project Risk Assessment (Enumerate & Quantify Project Risk)
- 4) Submit a detailed Project Management Document (Project Requirements, Project Plan, Risk Assessment, & Risk Mitigation (optional)
- 5) 1 Interim Presentation (Each team does one), PLUS, One Final Presentation (for ALL TEAMS) on “Project Management Document”.

- There is NO Software Programming of any kind necessary for completing the project
- Most of the material submitted in the project must be backed by: Solid References from the open source online arena (websites, blogs, articles etc.) and/or academic papers & journals and/or magazines.
- You will need to work with your project team outside of lecture hours to prepare your submissions and presentations. It is not necessary to meet in person, collaboration can be done via online tools (Zoom, WebEx, Google Hangout, Email ...)
- Project submissions are in form of either a Microsoft Word Doc or PDF.
- I am NOT going to judge/grade a project by the quality of the technical solution presented. The grading criteria is based on (for a 3 person team, 4 person teams shall require 33% more)
  - I. Presenting at least 100 nodes & descriptions in Requirements
  - II. Presenting at least 100 nodes in Work Breakdown & Project Plan
  - III. Presenting a proper quantitative Risk Model
  - IV. Presenting several High Quality References.

## Course Schedule

COURSE SCHEDULE			
Week	Topic	In Class Exercise	Chapter
SEP 08	Introduction to Project Management	OnLine Financial Trading System	1, 2
SEP 14	Project Management Process Groups	Detailed Requirements	3
SEP 21	Project Scoping	Delphi Exercise (Time Estimation)	4
SEP 28	Project Planning	Work Bkdwn & Resource Estimate	5
OCT 05	Project Launching	Project Network Diagram	6
OCT 12	Project Monitoring	Earned Value Analysis	7
OCT 19	Project Closing	Past Midterm Paper	8
OCT 26	MIDTERM (Probably)		
NOV 02	Project Risk Management	Project Risk Enumeration	9
NOV 09	Agile Project Management	Project Risk Quantification	10
NOV 16	Extreme Project Mgmt. & PMLC Models	PRESENT : Project (Initial-I)	11,12
NOV 23	Project Support Office, Portfolio Mgmt.	PRESENT : Project (Initial-II)	15,17
NOV 30	FINAL PROJECT PRESENTATION - I		13 Self Study
DEC 07	FINAL PROJECT PRESENTATION - II		14 Self Study
DEC TBD	FINAL EXAM (TBD)		1 to 17

## Project Schedule

PROJECT SCHEDULE		
Week	Topic	Description
SEP 08	Introduction	Online Financial Trading System
SEP 14	Project Team & Topic Due	Team Consisting of 3 students & Project Topic
SEP 21	Detailed Requirements Due	Alpha Version
SEP 28	Detailed Requirements Due	Beta Version
OCT 05	Detailed Requirements Due	Final Version
OCT 12	Detailed Project Plan Due	Work Breakdown
OCT 19	Detailed Project Plan Due	Resource & Time Estimation
OCT 26	Detailed Project Plan Due	Project Network Diagram
NOV 02	Detailed Project Plan Due	Final Version
NOV 09	Project Risk Assessment Due	Enumerate Project Risk
NOV 16	Project Risk Assessment Due	Quantify Project Risk
NOV 16	PRESENT : Project (Initial)	1 <sup>st</sup> half of teams
NOV 23	Project Risk Assessment Due	Final Version
NOV 23	PRESENT : Project (Initial)	2 <sup>nd</sup> half of teams
NOV 30	FINAL PROJECT PRESENTATION	Half the number of Teams
DEC 07	FINAL PROJECT PRESENTATION	The remaining Teams

## Important Dates

08-Sep	First Day of Class
14-Sep	Project Team Assignment
05-Oct	Detailed Requirements Due
26-Oct	Midterm (probably)
02-Nov	Detailed Project Plan Due
23-Nov	Project Risk Assessment Due
30-Nov	All Presentations Due
30-Nov	1 <sup>st</sup> Final Presentations in class
07-Dec	2 <sup>nd</sup> Final Presentations in class
14-Dec	Final Exam (probably) (TBD)

## Exams

- Two exams shall be held, a Midterm (20 % of total grade) & a Final Exam (30% of total grade)
- Both exams shall be held “ONLINE”, and at pre-specified times & a duration of 2 hours 50 min. I shall upload the question paper (both as Microsoft Word Doc & PDF) into CANVAS, 5 min prior to the start of the exam. Students may download the paper, and submit answers:
  1. Type answers in Word Doc & upload back into CANVAS either as Word Doc or as PDF
  2. Print the Word/PDF file, write answers by hand, scan the answer sheets and upload back into CANVAS.
  3. Write answers on blank sheets of paper, taking care to also write the question #'s. Scan the answer sheets and upload back into CANVAS.
- All my exams are always “OPEN BOOK, OPEN INTERNET”. This implies you can refer to any Book/Magazine/Article/Class-Notes or anything found on the Internet, while answering any exam.
- The following is NOT ALLOWED during an exam
  1. Any communication with any other person
  2. Any email/message
  3. Any use of a cellphone or any other communications device
  4. Copying from another person or any form of Cheating

## Final Grade

Grading is on a curve (relative grading), with the following scale as a guide

A = 90 to 100

B+ = 80 to 89

B = 70 to 79

C+ = 60 to 69

C = 50 to 59

NJIT CS Dept. guidelines state that this should be the grade allocation

A's  $\leq$  25 %

B+  $\leq$  25 %

B  $\leq$  25 %

Less Than B  $\leq$  25 %

### MAKE-UP EXAM POLICY

Make Up Exam policy is based upon generally accepted policies of the NJIT CS Dept., and individual circumstances.