

ISE 544 – Leading and Managing Engineering Teams (4 Units)

Course Syllabus – Updated 1/06/2020¹

Semester: Spring 2024, Sections: 31504D (On Campus) & 31704D (DEN)

Timing: Mondays 6:00 pm - 9:40 pm

Room: RTH 115 (On Campus Students)

Instructor: Ali Nowroozi

Office: GER216C, Alt.: Ronald Tutor Café or Tutor Center*

Hours: Wednesdays 2:30 pm – 3:30 pm (Appointment ONLY)*

*Coordinate with CP in advance for time & location

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Course Producers (CP)

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Objective: This course provides a framework for designing, understanding, and improving the effectiveness of engineering teams. The course will explore theory from disparate areas, including organizational behavior, engineering, and business management and how they can (or cannot) apply to real life situations. Several aspects of teamwork will be examined, from team formation and team dynamics to collective intelligence and decision-making.

We cover both traditional (structured and mechanistic) and modern (Complex and organic) team management theories and see how they can be used in conjunction to effectively manage engineering teams in real life. We capitalize on solving the paradox between these two extremes to address the “unique” challenges of designing, repairing, and/or improving *engineering* teams’ performance. Lectures typically start with a short “blind-folded” discussion to set the tone for the topic of the day and ends with a brainstorming session on unique characteristics of an *engineering* team, as applied to the topic of the day.

Our **unchangeable Core Values** (juxtaposed with **ISE Core Values**):



Creativity (Critical Thinking & Brainstorming)

Paradoxical blend of Boldness & Humility

Candor (Vulnerability & Personal Accountability)

Drive (Passion for *Self-learning*)

Open Forum

Care, collectivity, assistance, patience

Accountability, consideration

Commitment to excellence

Our **Permission-to-play values** (Ref. **The advantage**, Patrick Lencioni):

Academic integrity, Personal accountability, Information confidentiality and security

Students who share these *core values* as their guiding principles will enjoy their experience and add value to everyone’s experience. Students who do not share the above *permission-to-play* values, do not meet the minimum requirements for this course and **are advised to drop the course and seek academic integrity training immediately!**

Textbooks (Required):

1. Thompson, L. L., Making the Team: A Guide for Managers, Fifth Edition. Prentice Hall. ISBN-13: 978-0-13-448420-4 & ISBN-10: 0-13-448420-7
2. Lawrence Holpp, Managing teams, The McGraw-Hill Companies. ISBN 0-07-071865-2

¹ Due to administrative processes, this syllabus is subject to change. It is **the student’s responsibility to verify** with the instructor regarding any updates.

² All written communications with the instructor and/or the Course Producer **must be through emails with subject line stating course #, HW#, team #, and related topic.** **Both** should be included in the email for **urgent Mathers.** Emails must be **short and to the point** and they are normally answered in **36 hours**. We will **not** answer the questions that students post on the **DISCUSSION BOARD.** This medium is for technical discussions among the students **only.**

3. Lencioni, P., *The Five Dysfunctions of a Team: A Leadership Fable*. 2002: Jossey-Bass. ISBN: 0787960756
4. Lencioni, P., *The Ideal Team Player: How to Recognize and Cultivate The Three Essential Virtues*. 2016: Jossey-Bass. ISBN: 9781119209591
5. Lencioni, P., *The Motive: Why So Many Leaders Abdicate Their Most Important responsibilities*, February 26, 2020: Jossey-Bass.

Teamwork Simulation Exercises (Required):

We may adopt up to three teamwork exercises in this course. These exercises are designed by professional educators of the course concepts, and they typically cost \$15-\$20 each. So please set aside a budget of \$50-\$60 for this task.

Additional Readings (Optional, sources of the handouts*):

1. General Stanley McChrystal, Jeff Eggers, Jay Mangone (2018) , *Leaders: Myth and Reality*
2. Nick Obolensky (2016), *Complex Adaptive Leadership; Embracing Paradox and Uncertainty*, Second Edition
3. Jim Collins Books, Articles, and Tools (2002 – present): www.jimcollins.com
4. General Stanley McChrystal and Tatum Collin (2015)s, *Team of Teams: New Rules of Engagement for a Complex World*
5. Patrick Lencioni (2012), *The Advantage; Why organizational health trumps everything else in business*, *Jossey-Bass Publishers*
6. Howard Behar with Janet Goldstein (2007), *It’s Not about the Coffee; Leadership Principles from a Life at Starbucks*, *The Penguin Group*
7. Patrick Lencioni (2006), *Silos, Policies, and Turf Wars; a Leadership Fable about destroying the barriers that turn colleagues into competitors*, *Jossey-Bass Publishers*
8. Malcolm Gladwell (2000), *The Tipping Point; How Little Things Can Make a Big Difference*, *Back Bay Books*
9. Margaret L. Wheatley (1999), *Leadership and the New Science; Discovering Order in a Chaotic World*, *Berrett-Kohler Publishers*
10. John Briggs and F. David Peat (1999), *Seven Lessons of Chaos; Spiritual Wisdom from the Science of Change*, *Harper Perennial*
11. Richar Guzzo, Eduardo Salas, and associates (1995), *Team Effectiveness and Decision Making in Organizations*, *Jossey-Bass Publishers*
12. Michael F. Barnsley (1993), *Fractals Everywhere*, *Morgan Kaufmann*
13. J. Richard Hackman and Greg R. Oldham (1976) *Motivation through the Design of Work: Test of a Theory*, *Organizational Behavior and Human Performance* 16, 250-279 (1976)
14. *Managing Management Time, Who’s Got the Monkey?* (1987), William Oncken
15. *The Prince*, Niccolò Machiavelli, Rufus Goodwin (Translator), Benjamin Martinez (Illustrator), W.K. Marriott (Translator), Denis Daly (Narrator), Μαρία Κασωτάκη (Translator), **(1513!)**

* *The handouts are required readings, but not their sources*

Course Material: Text Book, all topics discussed in lecture by the instructor, guest speaker (if any), classmates’ experiences and competencies, and all related handouts.

Study Guidelines: The lectures and class discussions are not limited to reading the assignments. Merely reading the text book does not guarantee students’ successful completion of the course. The instructor’s Class notes are not sufficient either and all students are responsible to take their own notes in the class and use them to study and elevate their understanding of the reading materials and the class discussions.

Performance Evaluation:

1. Class Participation	100 (10%)	← <i>Instructor’s assessment (non-negotiable)</i>
2. Case Studies	300 (30%)	
3. Exams	300 (30%)	
4. <u>Term Project</u>	<u>300 (30%)</u>	
Total	1000 (100%)	

1. **CLASS PARTICIPATION**

- i. **10 points:** All students to submit a student profile questionnaire and propose their own CLIENT TEAM (potential candidate for the term project) **within the first week** of joining the class. Students can read the preliminary term project criteria (attached) to get a general idea how to select a client team. You will get full credit upon on time submittal. This assignment is not graded, but it will not be accepted after the deadline (with or without penalty).
- ii. **10 points:** On the first class (January 15, 2019), you will be given 10 minutes to read this syllabus and take an in-class quiz on this syllabus. Students who join later will take this quiz before the class, during the break, or after the class on the first session they join the class. DEN students whose time zone allows, will be allowed to turn in their answers anytime during the class (to follow CP's instructions for submittal), on January 15, or the first day they join the class. DEN students with time zone restriction will be accommodated to take the quiz as close to the class time as feasible for them.
- iii. **30 points:** Students who are not talkative but attend the workshops effectively can earn up to 30 points. DEN students who are unable to join the workshops live due to time zone restrictions will earn these points by commenting on the workshops, the same way they make comments on the class discussions, i.e. through the Discussion Board (within the following week).
- iv. **50 Points:** ON-CAMPUS (OC) students are expected to **attend** and **participate** in as many class discussions as possible. *Participation* in this class means **active contribution to in-class discussions, debates, Q&A on presentations, etc.** If you do not talk in this class you will not earn any points in this category (except for the DEN students who cannot attend and comment on the discussion board, see next bullet). Attending the workshops and talking to your teammates within the workshop does not count towards this category (see the previous bullet). While we do not take attendance in this course (except for the final presentation sessions¹), OC students who miss several sessions will also miss the opportunity to improve their learning experience and contribution and, therefore, their class participation grade could be adversely impacted.
- v. **50 Points:** DEN students have the following options to participate in the class discussions:
 - a. They can make comments on the lectures and class discussions, using the **discussion board**, under the appropriate lecture forum, **within one week of the lecture**.
 - b. Upon availability, they can participate **live** in class discussions and will get credit for that.
 - c. Text messaging through WebEx is not the most effective way of communication, but such comments will be addressed **as practically as possible**.
 - d. DEN students who are able to physically join the class, are strongly encouraged (but not required) to do so.

By registering in this course, students are accepting the instructor's judgement and will not debate on their class participation grades. Nevertheless, once the class participation grades are posted, students will have a chance to **provide evidence** of their participation, if they believe some aspects of their participation were not captured accurately. This, however, shall be only limited to providing dates & times of the student speaking in the class (or through WEBEX) and/or teammates' confirmation of effective contribution to workshops. Students are encouraged to record the time and date of their in-class contribution to discussions, debates, Q&A, etc. as the course progresses, so they can share with the instructor if needed. The grade improvement is limited to the maximum points allowed for the class participation category for which the evidence was provided (items i – v.).

Students who do not participate in any of the open discussions will not receive any class participation points in category iv (v for DEN), even if they attend all classes. **Term project activities are not considered as class participation**. Attending the workshops can earn up to 30 points for its own category of class participation (iii),

¹ Attendance will be taken only at the students' presentation sessions and All OC students are required to attend those sessions.

as stated above. Talking to teammates (term project or workshop) does not earn any additional class participation points.

All students to avoid using the discussion board to ask questions from the instruction team or to discuss personal/non-course related topics (exception: the welcome page of the course site is designed for posting personal information). All questions should be emailed first to the teaching assistant and then, if not responded to in a timely manner (see footnote 1 in page 1), to the instructor.

2. **CASE STUDIES** consist of **4@75 Points Each real-life (or simulated) business cases**. You will be expected to read the case study **individually**, write a report on it, and be prepared to discuss the case in class, as time allows. DEN students may post their comments on the case study via DEN Discussion Board, after the Case Study final submittal deadline. The case studies **MAY NOT** be discussed before the FINAL submission deadline (including the grace period with penalty, see below). The CASE STUDIES due dates are shown in the attached schedule.

ALL CASE STUDIES MUST BE PERFORMED **INDIVIDUALLY**, NO “TEAMWORK” IS ALLOWED HERE! Students must attempt to use their intellect, analyze the case comprehensively, and answer the questions in their own words. In cases of necessity, appropriate quotation is required. Merely repeating the lecture and text book materials without proper and direct connectivity to the case study will not earn you any credit. The Students, who miss the deadlines and submit the case studies up to one week late, will be graded based on 80% of that assignment’s total points. No assignment will be accepted afterwards.

3. **TWO EXAMS** will be given on with the following points distribution:

MIDTERM (Take-Home)	150
FINAL EXAM (Optional)	150
Total EXAMS	300

The exams will cover the material presented up to and including the preceding lecture. Points will be assigned to each section of the exam. Partial credit will be awarded according to work shown. No re-takes will be allowed. No make-up exam will be given.

The Midterm Exam is take-home and will be managed as homework and its timing is shown in the “Assignments and Due Dates” sheet. Like all homework and case assignments, team work is strictly prohibited on this assignment.

After the last class, students’ pre-final GPA will be announced. Students who are happy with the GPA they received may choose not to take the final exam and that will be their final GPA. Students who feel they want to improve their GPA can choose to take the final exam.

Grades are not negotiable in this course. If, after verification of all grade categories by the instructor, a student’s pre-final grade is on the borderline, he/she is encouraged to take the final exam to improve his/her grade, instead of requesting reconsideration of the grades on the completed work. Such reconsideration, only if justified, can happen after the final exam.

Students, who have a GPA of 3.00 or less and/or are on probation, must meet the professor before add/drop deadline to evaluate their ability to complete this course successfully. If you are challenged to graduate and this is an elective course for you, you may want to reconsider your choice. The goal of this course is to prepare better leaders for our industries, not just to graduate.

4. Students start working on their **TERM PROJECT** after SESSION 3. The grading structure is provided below:

Project Proposal	40
Shark-Tank Presentation	60
Final Team Presentation	100

The term project criteria and its grading structure will be provided in detail in SESSION 3 (a draft copy from last semester guidelines is attached to this syllabus **for reference only – subject to change**). The teams will present their proposals in SESSION 5 and students get to “invest” in the other teams’ projects (details to be explained in SESSION 3). All project teams are encouraged to meet the professor frequently during the project life cycle and get his feedback. Term Project Meetings with the instructor would be conducted in an ONLINE mode via Zoom. These meetings are not intended for teams’ evaluation and the purpose is merely to consult with the professor to assure alignment of the team’s progress with the course objects and to maximize everyone’s learning experience.

Final term project presentations are scheduled for the last two sessions of the class. Teams (and individuals within teams) will be evaluated by the instruction team based on the quality of their work, their ability to present and educate the audience, and their ability to rationalize and defend their conclusions. ALL members¹ of the presenting team must contribute to the discussion and to the Q&A. Ample time will be provided for Q&A. Term project grades are ultimately based on the instructor’s judgement.

5. **LINES OF COMMUNICATION:**

- All students must follow the communication protocol set forth by the Instruction team. Assignments that are supposed to be posted on the course site will NOT be graded if submitted via other media (email, hardcopy, etc.), unless specifically and exceptionally agreed, in advance.
- Assignments must be submitted in the exact format instructed by the CP and/or the instructor. In cases of discrepancy, the instructor’s guidelines supersede. Assignments that do not follow submittal guidelines (File type, naming structure, content format, etc.) will NOT be graded.
- All students are responsible for proper communication and for timely transfer of their assignment files. All students to make sure all their communication lines are open and they are able to properly upload their files, during the FIRST WEEK of their registration in this course. In the exceptional case of possible glitches in the D2L system, if it can be proven, a student may submit the assignment by email. In this case, the “Date Created” attribute of the submitted file will be considered as the submittal date.
- All students are responsible to have proper training with the D2L system. If you need to schedule a training please contact DEN staff directly (or through the course CP) to arrange for a training session as soon as possible.
- **Please refrain from writing emails longer than one paragraph, 3 lines.** Long emails are not effective means of communication as they have high potential for communication biases (refer to Chapter 13 of the text book by Thompson). If you are interested to debate on a course topic, you can post your subject on the discussion board as explained above. You are also encouraged to meet the instruction team as often as you please to discuss the course materials, term project progress, and logistics. DEN students may schedule a phone appointment for this purpose.

All due dates are provided in the next page: “Assignments & Due Dates”. The due dates may be changed as the course progresses, at the instructor’s discretion only (per consultation with the CP). Students must take the exams on the exam dates and times. Exceptions only include special cases such as sickness, time zone difference (for DEN students), or such unavoidable circumstances. **PLEASE DO NOT SCHEDULE ANY TRIPS ON THE EXAM DATES. PERSONAL OR BUSINESS ENGAGEMENTS DO NOT JUSTIFY EXAM DATE & TIME CHANGES.**

Final Grades:

¹ DEN students who are unable to participate in their team presentation due to justifiable restrictions (time zone difference, conflict with work-hours, etc.) must inform the instruction team by session 4 and get their approval and must provide recording of their presentation to a teammate to present for them. Any student’s absence in the final presentation without coordination with the instructor, and his approval, will cost the student’s individual grade in the term project 50 points and the team’s Final Presentation Grade 10 points.

Course FINAL GRADES will be determined by the distribution of point totals for the class. “Natural groupings” will be used to assign letter grades. The highest scoring group will receive A’s, the next group is the A-’s, and so on. A single point will not be the difference between any two letter grades. A “gap” must exist to create a grade boundary. Students are responsible to understand the process clearly as their actual performance may differ from their perceived performance which is conventionally based on percentages only.

This is a qualitative management course and students’ performance assessment is based on the instructor’s judgement. Each student’s performance data combined with the instructor’s personal assessment of his/her level of effort and learning experience will determine that student’s overall grade. Ultimately, the instructor will be the sole judge of all students’ incremental and final GPA’s based on personal experience. The grades are NOT negotiable and long emails debating on this topic **will not be responded to**. Please note that by taking this course, you are giving the instruction team full authority to evaluate your performance based on their judgement. Nevertheless, if a student has strong evidence that the evaluator (the instructor or the CP) may have mistakenly omitted a portion of his/her response, a **short one-sentence email** to the CP is sufficient to get our attention.

Assignments and Due Dates (Subject to change)¹

Session	DATE	TOPIC	ASSIGNMENTS DISTRIBUTION	ASSIGNMENTS DUE	READING ASSIGNMENT
1	Jan. 08	Introduction and opening discussion The T.E.A.M. paradox	Students' profile questionnaire ² (Start the 5D* Fable)	Syllabus Quiz (session of joining the class)	Handout Thompson Ch.1
2	Jan. 22	Team Design and its challenges Initial Teams Formation	(week of joining the class)	students' profile questionnaire (week of joining the class)	Thompson Ch.4 Thompson Ch. 13 (Brief) Holpp Ch. 1
3	Jan. 29	Team performance... Finalized Teams Formation Explain Term Project Criteria	Case #1 Project Proposals (Start the ITP* Fable)	(Finish 5D Fable)	Thompson Ch. 2 Holpp Ch.s 2&4
4	Feb. 05	... Team performance Teamwork Culture Introduction to Chaos Theory; a metaphor for teamwork			Thompson Ch. 2 Holpp Ch.s 2&4 Thompson Ch. 5 Holpp Ch. 2
5	Feb. 12	The Shark Tank Experience!	Case #2 (Start the TM* Fable)	Project Proposals (Finish ITP Fable)	
6	Feb. 26	Communication & Collective Intelligence Competition & Cooperation Cohesion & Conflict...		Case #1 (75 points)	Thompson Ch. 6 Thompson Ch.s 8 &12 Holpp Ch.10
7	Mar. 04	...Cohesion & Conflict Human Resource Practices	Case #3 Take-Home Midterm	(Finish TM Fable)	Thompson Ch. 3 Holpp Ch.12, Handout
8	Mar. 25	Team Leadership		Case #2 (75 points)	Thompson Ch. 11 Holpp Chs 5,7,8, 9&11
9	Apr. 01	Decision making & Problem Solving Creativity	Case #4	Case #3 (75 points)	Thompson Ch. 7 Holpp Ch. 8
10	Apr. 08	Virtual Teams & Multi-Cultural Teams DEN Discussion Open Discussion & Concluding Remarks		Midterm (150 points)	Thompson Ch. 13 Discussion Board All Presentations: (Instructor and students)
11	Apr. 15	Term Project Discussion (At least TEAMS 1-6)		Case #4 (75 points) All Presentations packages due at 3:30 pm	
12	Apr. 22	Term Project Discussion (At most TEAMS 7-12)		360 Evaluations	
	May 01	Final Exam – Optional 7:00 pm – 9:00 pm (150 Points)	In Accordance with USC Final Examinations Schedule Guideline: https://classes.usc.edu/term-20241/finals/		

* 5D: The Five Dysfunctions, Lencioni

* ITP: The Ideal Team Player, Lencioni

*TM: The Motive, Lencioni

¹ This is a *general* road map to the course. As you will learn, depending on the general class absorptive capacity, we may change the pace of the course to keep sufficient emphasis on the depth, as well as breadth of the content, within the context of the course. Students are responsible coordinate with the instruction team to prepare for each class, as the “Reading Assignments” may change as the pace of the course changes.

² Students who register late will be assigned this task upon registration and will have one week to turn it in

Outreach DEN Students

This course is conducted in outreach format, meaning, it is available to off-campus students via video recording and streaming. Students in on-campus or off-campus receive the same instruction and perform the same tasks.

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 <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students.

Emergency Services

If an officially declared emergency makes travel to campus infeasible, USC Emergency Information <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.

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.

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.

We take academic integrity very seriously. Since this is a qualitative course and students should use their creativity to respond to most of the questions, it will be very easy to identify information borrowed from others (other students, text books, articles, etc.) without proper quotation. If more than one sentence is identified to closely mimic a source (or another student's response) on a qualitative & creative question, disciplinary action will be taken on **all** students involved.