SYLLABUS
ISE 544: Management of Engineering Teams
Instructor: Lynne P. Cooper, Ph.D.
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Summer 2018: June 27 – August 7, 2018
Tuesdays & Thursdays 10:00am-1:10pm

NOTE: This is a preliminary draft to aid students in deciding whether to take this course. A final version of the syllabus will be published prior to the start of classes.

Course Sections:	31704 (for DEN students) and 31504 (for on-campus students), 3 Units
Prerequisite:	Graduate student standing in engineering or related discipline, or special approval by Instructor is required. No special engineering skills (beyond general problem solving ability) are required.
Class Location:	USC Olin Hall of Engineering (OHE), Room TBD
Office Hours:	Office Hours: GER 309A, 213-740-0867

- On Campus: Tuesdays & Thursdays, TBD
- Virtual Office Hours: by appointment only
- May need to call for access if building locked
- For emergencies only: 208-217-0308

Course Producer:	TBD
Required Text Books:	*Five Dysfunctions of a Team: A Leadership Fable (L)*

Patrick Lencioni**,** Jossey-Bass, ISBN: 0-7879-6075-6
You are responsible for reading the whole book

Feedback that works: How to Build and Deliver Your Message (W)
Sloan R. Weitzel, Center for Creative Leadership, ISBN: 978-1932973716
You are responsible for reading the whole book

12: The Elements of Great Managing (W&H)
Rodd Wagner & James K. Harter
Gallup Press, ISBN: 978-1595629982
You are responsible for assigned chapters

Note: either physical or e-book versions are acceptable.

When contacting the Course Producer or Instructor via email, please start your subject with "ISE544:"
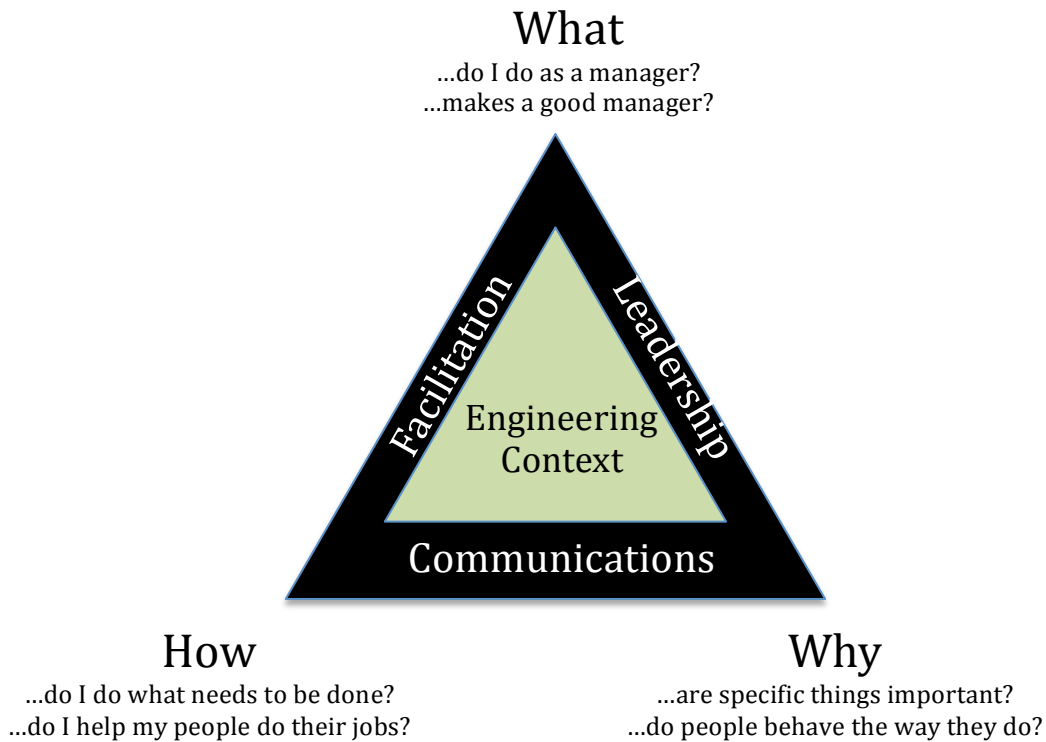
General Note on Workload:

As a rule of thumb, for a graduate level class the workload outside of class should be 2-3 hours per unit. Therefore you are expected to spend ~6-9 hours each week for this course *outside of class*. Working on teams, especially when there is a mix of on-campus and DEN students, requires additional time to handle coordinating schedules, arranging meeting times, and gaining proficiency with virtual meeting tools. The team exercises and workload from traditional out-of-class activities (e.g., reading, homework) have been scaled accordingly. I think of this class as a lecture with a "teamwork laboratory."

Note: because this is an accelerated summer session, it is absolutely critical that students allocate sufficient time to participate in required teamwork exercises outside of class. Each student is expected to commit to a 2

hour block of time between Thursday-Monday, as negotiated with their assigned team members. Every effort will be made to assign teams to ensure mutual availability, but students are expected to be flexible during the 6 weeks of class.

This course provides a framework for understanding and improving the management of engineering teams. The course will explore the theoretical foundations of teamwork and leadership, along with the practical application of tools and techniques for use in work settings. Topics include team formation, dynamics, processes, organizational context, and measures of effectiveness. Special emphasis is placed on developing leadership skills for motivation, managing conflict effectively, and giving constructive criticism and feedback; as well as developing general communications skills to work effectively in a distributed, multi-cultural environment. The course will cover what to do, why it's important, and how to do it, as depicted in the figure below:

What
...do I do as a manager?
...makes a good manager?

Facilitation   Leadership

Engineering
Context

Communications

How
...do I do what needs to be done?
...do I help my people do their jobs?

Why
...are specific things important?
...do people behave the way they do?

This course follows principles for action-based and reflection-based learning. Simply put, these state that you will have a better, more effective learning experience if you (1) actively apply what you learn, and (2) reflect on what you have learned and experienced. This class therefore requires students to work in teams throughout the semester. The sequence of team exercises and small projects emphasize teamwork in an engineering context. While you will be using your existing engineering skills – the focus of these exercises is to stretch and develop your teamwork "muscles" and the skills you need to be an effective manager of engineering teams. The projects have been scoped so that the required "taskwork" is relatively straight-forward so the team has sufficient time to focus on "teamwork."

This course is a collaborative effort between students and the instructor. As such, students are encouraged to offer suggestions, communicate problems, and contribute to creating a learning experience that is valuable to them. My role is to facilitate your learning; your role is to actively learn. Let's work together to make sure we all accomplish our goals for the semester. *Please note that you are allowed to be creative and think "outside the box" with respect to the assignments and structure of the class. Unless something is explicitly forbidden – it is fair game for modification, with the approval of the instructor. An important skill for a manager is to understand when & how to change the context to enable the team to work more effectively.*

Course Components:

- **Classroom Lecture**

Twice weekly lectures will discuss the relevant theories, methodologies, processes, tools, and practice of managing engineering teams. Reading assignments from required texts and supplemental reference resources will be given throughout the session. All students are encouraged to study these reading assignments as a "preview" for the lectures. A combination of power point slides and in-class lecture notes will be available on the DEN site for student review.

All students are encouraged to bring their computers to class and participate in a live chat. The TA and/or instructor will monitor the chat throughout the lecture. The background chat provides a way for students to share information in real time, post questions and insights for later discussion, and connect with their fellow students. In the past, the chat interaction between the DEN students and in-class students has lead to a lively, dynamic and much more enjoyable learning environment for everyone.

Off-campus students are encouraged to watch the live web castings of classroom lectures whenever possible through the DEN systems (e.g., WebEx). Live lectures are recorded for later review by all students. Off-campus students can connect by audio via the DEN system, or participate in background chat via WebEx. For technical questions regarding remote lecture/question participations, off-campus students should consult with DEN technical staff directly. While all students are encouraged to participate in the "live" class, real-time attendance is not required.

Each lecture builds upon material from previous lectures. It is the student's responsibility to watch lectures in a timely way, especially given the accelerated nature of the Summer Session.

- **Homework Assignments [TBD points]**

  Homework Assignments will consist of: (1) Exercises that demonstrate the student's understanding of concepts discussed in class or in mandatory readings, (2) work that specifically prepares the individual student for the upcoming Team Laboratory, (3) peer evaluations of team members, and/or (4) short answer reflection-type questions that ask the student to relate his/her team experiences to concepts discussed in class. **Assigned on Tuesday, due by End of Day Friday**.

- **Team Laboratory Exercises [TBD points]**

  The team exercises are the equivalent of laboratory experiments; they provide an opportunity to experience and observe teamwork in practice and to test out teamwork skills. The exercises themselves have been crafted to use teamwork/engineering management skills and to fit into the 2-hours of team-meeting-time expected each week (additional individual work time may be required to complete the task). You will receive instructions and guidelines for each exercise that sets the expectations and describes the product to be produced. All team members are expected to contribute their fair share and will receive the same grade on team projects. **Assigned on Thursday, due by Start of Class the following Tuesday.**

  Team Meetings: Time/location are at the discretion of the team, with the constraint that they must happen between assignment on Thursday and due date on Tuesday.

- **Team Member Evaluations & Team Participation [TBD points]**

  Students are expected to be an engaged, active, and productive member of the teams they are assigned to. Each team member is responsible for evaluating the task performance and team behavior of their fellow team members using a basic form that will be discussed in class. Students will be graded on the quality of the evaluations they write for their team members (fair, thoughtful, specifics to justify their ratings). Separately, a team participation grade will be assigned based on the evaluations received for each student.

  Warning: Students who habitually fail to participate in team meetings and/or team projects will be heavily penalized.

- **Final Exam [TBD points]**

The final exam will be held during the final class and must be taken either on campus or in a proctored location. The exam will cover concepts discussed in class, covered in the Laboratories, or discussed on the Discussion Board. A "concept key" will be provided outlining key models and concepts for use during the exam. Students requiring accommodations should provide the required DSP paperwork as early in the course as possible.

- **Discussion Board/Course Participation [Extra Credit]**

  The course Discussion Board will be used to post questions and answers about assignments, readings, or other items of interest to the class. Students are also encouraged (but not required) to submit discussion questions that go beyond the material covered in class, e.g., relate in-class topics to personal work experiences, post an interesting article. The discussion board will NOT be graded, however, **meaningful** participation in the discussion board may be taken into consideration for extra credit.

  Meaningful interactions outside of the Discussion Board may also be taken into consideration for extra credit, for example in-class/chat participation, email exchanges, office hours.

Course Website:

Students' learning of this course is supplemented by a specially designed course website on the DEN D2L instruction system (http://www.uscden.net). All registered students have access to this website. The course website structure is implemented to support the specific organization of the course instruction as described in this syllabus. All students should browse around the entire site to familiarize themselves with various areas and functions of this course website.

The course website will contain the following information:

- News -- important announcements of this course (check it frequently); should be on your course home page
- Course Documents – Syllabus, required readings, and links to external resources
- Organized by Assignment:
  - Description of/Instructions for Exercises, Assignments, and Evaluations
  - Evaluation guideline
  - File template (as appropriate)
  - Either Dropbox, Discussion Board, or Quiz for submitting assignments
  - Discussion Board specific to the project
- Organized by week:
  - Course Lectures -- video files of each lecture
  - Course Presentation Package
  - Any Lecture-generated material
  - Chat transcript
  - Weekly discussion board
- Reference Materials – Readings and urls relevant to the class, but NOT REQUIRED.
- Team Spaces – organized based on team assignments. Only members of the team and instructional staff have access to a team's assigned space.

Assignment Submission Policy:
Specific submission instructions will be provided for each assignment, including file-naming conventions. Late assignments will be accepted only with permission of the instructor and will incur a penalty (which can be waived by the instructor when there are extenuating circumstances, e.g., medical emergencies, emergency work-related travel).

Course Grading:

Assignments are worth the following points with following grade assignments:

Assignment	Points
Team Laboratory Exercises	TBD
Homework Assignments	TBD
Team Member Evaluations & Team Participation	TBD
Final Exam	TBD
Extra Credit / Participation Points	TBD
Total	1000

A	≥ 960 points
A-	≥ 930 points
B+	≥ 900 points
B	≥ 870 points
B-	≥ 850 points
C (or worse)	<850 points

These are hard cut-offs. Final class grade will be based on the total points you have earned – <u>no rounding up</u>.

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 Section 11, *Behavior Violating University Standards* https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* http://equity.usc.edu or to the *Department of Public Safety* http://adminopsnet.usc.edu/department/department-public-safety. This is important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage http://sarc.usc.edu describes reporting options and other resources.

Support Systems
A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. 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.

The Office of Disability Services and Programs http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. 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 blackboard, teleconferencing, and other technology.

Course Schedule:
THIS IS A WORK IN PROGRESS AND WILL CHANGE! Use as a reference for type of material to be covered and general assignment schedule

Cl ass #	Date	Due	Mandatory/*Optional* Readings	Topics	Work assigned / Due date
1	Th 6/28		**SYLLABUS Bens (2007) - Facilitation** *W&H: Intro (pp. ix-xviii);*	- Overview: roadmap for course - Expectations/Outcomes - Intro to the main models - "The Boss" & "Team Player" - Facilitation - Personality (Myers-Brigg)	**DUE Fri 6/29 EOD:** Student Profile & Availability Myers-Brigg Test **DUE Mon 7/2 5pm:** Special teaming requests

2	Tu 7/3		**Cohen & Bailey** (p 239-245 and 281-284) *"Apollo 13"* **W&H: 2nd, 4th, 8th Elements**	Cohen & Bailey Model
				  - Types of Teams
				  - Team Effectiveness Outcomes
				  - Environmental Factors
				  - Organizational Factors
				  - Team Composition, Diversity
					DUE Fri 7/6 EOD: Homework #1

3	Th 7/5	**HW #1 (Fri)**	**W&H: 7th, 11th Elements Brett, Behfar & Kern (2006)**	Team Assignments
				Cohen & Bailey Model
				  - Group Processes
				  - Group Psychosocial Traits
				  - Rules & Norms
				Setting Performance Expectations
				Cultural Issues in Communication
					Last day to Drop Class w/Refund: 7/5 **Assigned: Team Lab #1**

4	Tu 7/10	**TL #1**	**Weitzel: pp. 6-30** *"Conference Travel"* **W&H: 1st, 3rd, 9th Elements**	Behavioral vs. Performance Feedback Effective Feedback (SBI) Cooper Communication Model	**DUE Fri 7/13 EOD:** Homework #2
5	Th 7/12	**HW #2 (Fri)**	**Group Development: Articles 1 & 2** *Gersick (1998)* *Tuckman (1965)*	Models of Team Development Team Dynamics	**Assigned: Team Lab #2**
6	Tu 7/17	**TL #2**	**W&H: 6th, 10th, 12th Elements Conger (2011) Nichols/Harvey** *Elron & Vigoda (2003)* *Keeney (2009)*	Decision Making in Teams Fundamental Attribution Error Motivation, Persuasion	**DUE Fri 7/20 EOD:** Homework #3

Cl ass #	Date	Due	Mandatory/*Optional* Readings	Topics	Work assigned / Due date
7	Th 7/19	**HW #3 (Fri)**	**5 Dysfunctions of Teams** *Detert & Edmondson (2006)*	Trust & Conflict Psychological Safety	**Assigned: Team Lab #3**
8	Tu 7/24	**TL #3**	*Pelled & Adler (1994) Jehn & Mannix (2001) Griffith, Mannix & Neale (2003)*	Conflict Managing Conflict Conflict Management Styles	**DUE Fri 7/27 EOD:** Homework #4
9	Th 7/26	**HW #4 (Fri)**	**Weeks (2011) Tannen (2011)**	Conversational Dynamics Communication Challenges Crucial Conversations	**Last day to Drop Class w/a "W": 7/30 Assigned: Team Lab #4**
10	Tu 7/31	**TL #4**	*Milgram (1963) Esser (1998) Hodges & Geyer (2006) Darley & Batson (1973) Darley & Latane (1968)*	Human Dysfunctional Behavior Practical tips	**DUE Fri 8/3 EOD:** Homework #5
11	Th 8/2	**HW #5 (Fri)**	**Suters (1992) Hill (2007)**	Team Member Peer Evaluations Review Concept Key for Final Exam Managing Teams – Wrap-up	**Assigned: Team Member Peer Evaluations (TMPE)**
12	Tu 8/7	**TMPE**	**Final Exam Team Member Peer Evaluations due**		