

ISE 544 - Management of Engineering Teams
Summer 2015 M-W 6:00-9:10 – Draft Syllabus

Instructor: Dr. Sioukas

Office: GER 216C

Office Hours: M-W 5:30-6:00 pm

Contact Info: 213.740.4893 phone, 213.740.1120 fax - uscteams@sbcglobal.net

Teaching Assistant: Yalda Khashe

Office: OHE 340

Office Hours: Wednesdays, 4-5 pm (or by appointment)

Contact Info: Khashe@usc.edu

Overview and Objectives

The objective of this course is to provide engineers who are working in team-based environments and/or are moving into technical management the necessary skills for effective performance. The course starts by setting the theoretical framework for the development of the team-based organization with its emphasis on integrated product development and processes, and provides the fundamentals of team effectiveness. Fundamentals of team dynamics with issues such as values, norms, idea generation, facilitation, leadership, decision making, motivation, coaching and communication will be presented. Finally, current performance management techniques as well as the latest trends in team-based organizations will also be addressed.

Required Reading

- Sioukas, T. The Solution Path: A Step by Step Guide to Turning Workplace Problems into Solutions, Jossey-Bass, 2003.
- Galbraith, J. Designing Complex Organizations, Addison-Wesley (integrated in the lectures).
- A reader containing various articles is available at the bookstore or online.
- Class powerpoint presentations

Recommended Reading

- Robbins, DeCenzo, and Coulter, Introduction to Management, Pearson-Prentice Hall, 2013
- Parker, G. M. Cross-Functional Teams. San Francisco, Jossey-Bass, 2003.
- Katzenbach, J.R. and Smith, D. K. The Wisdom of Teams. Harper Business, 2003.
- Kelly, T. The Art of Innovation. Profile Business, 2002.

The instructor can recommend a list of additional reading materials and resources.

This syllabus might be revised as needed during the term.

Grading

Participation and homework	10%
Case papers	20%
Projects and presentations	30%
Test 1	20%
Test 2	20%

Case Papers

The first case, MOD IV/Honeywell, is included in your reader, while the second case will be posted on the web site of the class. You are asked to analyze and diagnose the case and propose a plan of action. Your case should be up to 6 pages long, 12 pt, type, typewritten, double-spaced with maximum 1" margins. It should be organized with:

- a short introduction (one paragraph)
- your diagnosis/analysis
- the recommended action plan as it relates to specific questions, and
- the conclusion (one short paragraph)

Some guidelines for breaking down a case are included in the web-posted file named "*Procedures in Analyzing a Case*." You are expected to use and reference theories and models described in class. Please avoid repeating the facts of the case. Instead, focus on the analysis/diagnosis and rationale for the plan of action (specific questions are often asked.) Cases are graded by the Teaching Assistant. Grades are assigned by ranking. Cases are ranked based on the richness of analysis/diagnosis and the creativity of action plan.

Cases are due at the beginning of the class. They may be discussed after they are due. You are all expected to participate. You can turn in your case one session late for 50% of the credit. No credit will be given afterwards.

Group projects

Class projects are completed by groups. Ideally, groups consist of three to five members located at the same site with one or two team members from the live class. When a location has only one or two students and is far from other locations, teams complete projects virtually.

Group projects give you a chance to put your skills to the test. There are two projects: (1) the top 10 lessons of The Solution Path; and (2) a team building exercise for your group. In the first project, you get together with your team and complete an actual project. You then get a 360 evaluation from all team members, peers (other students in class), the class instructor, and the TA. With that 360 evaluation, you do an actual evaluation for your team and move on the second project, a team building project. I provide guidance as needed and some of the work takes place in class. *Hard (printed) copies of all project assignments are required.*

Project One: The top 10 management lessons from The Solution Path (TSP - 15 points)

Deliverables: Presentation (up to 12 slides max with 28 point font) and hard-copy of power-point file

Each presentation lasts up to 20 minutes including 5 minutes for questions and answers. Team members assign roles and responsibilities for the project. Then each team member reads The Solution Path and completes an individual homework of identifying three lessons from the book. Team members conduct a brainstorming exercise with the following objective: Top 10 effective management lessons from The Solution Path. Lessons are simple points rather than multiple/composite point themes. After generating several lesson ideas, you prioritize them into the top 10 lesson ideas and develop an illustration/example for each one. Each lesson is depicted in one slide with a summary title, an actionable single point lesson stated in the affirmative, and simple point illustration/example that showcases your lesson. The presentations include the following:

- Overall description of The Solution Path (1 slide)
- The top ten management effectiveness lessons and illustrations (examples) from The Solution Path (10 slides)
- Your team's role and responsibility matrix (1 slide)
- Appendix that includes your full brainstorm, prioritization criteria, prioritization votes, and citations.
- Question and Answer

Project Two: Team building (TB- 15 points)

Deliverables: Presentation (up to 12 slides max with 28 point font) and hard-copy of power-point file

This project starts with a summary feedback from 360 evaluations. You look at them collectively (as a team) and then conduct a basic team evaluation (what went well/ areas of improvement). The next step is for you to collect data on your team and yourselves (individual personality tests and conflict types), understand yourselves and others, and determine what impacted your team performance. You complete a second individual homework (four ideas for areas of team improvement) which I will grade and return to you. You work with your team members to conduct a brainstorming exercise with the objective: How can we improve our team effectiveness? You follow up with a prioritization exercise whereby you decide on: What are our top ten and top three areas of improvement as a team? You end this exercise, with an action plan for tackling each of the top 3 (out of 10) areas of improvement. This is team building 101!

- Summary and overall description (1 slide – does not count)
- Presentation (up to 12 slides)
 - Team Evaluation: What went well (1 slide)
 - Data collection (Personality types and Conflict types) and Lessons Learned (2-3 slides one for each of the following)
 - Top 10 areas of improvement (3 slides)
 - Role and responsibility matrix updated
 - Action plans for the 3 most important areas of improvement (3 slides) (see TSP ch8)
- Appendix that includes your full brainstorm, prioritization criteria, prioritization votes, and citations.

Distance education students in the region of Southern California are expected to come to class for at least one their presentations. There is no need for you to fax/email your presentation. Out of state/region students, who cannot come to class, are required to both email and fax their power-point presentation through the DEN system. They can then call during class to do their presentation.

Projects and project-related homework are graded by the instructor. Your reports, worth 15 points each, are graded and ranked. Grading is based on the completeness and quality of your projects (primarily) and report ranking (secondarily). Report ranking is based on: (1) creativity/ innovativeness; (2) professionalism; (3) depth of literature /methods /analysis; (4) quality of your solutions; and, when applicable, (5) likelihood of and steps for implementation (overall feasibility, budget, and action plan).

All team members need to contribute! Therefore, each student submits a **group member evaluation** whereby you evaluate your peers. This evaluation may increase or decrease your final project points. Moreover, you need to provide copies of the power-points on the day they are due. Failure to do so will result in a 50% loss of points on the respective project.

Failing to conduct presentation can result in a penalty of up to 20% of the total possible points.

Important: Please note that a good group project can only raise your individual final grade by one letter grade (e.g., if your individual grade places you at a B-, an excellent group project can only bring you to B).

Case studies/Project Report:

On-campus students must turn in their assignments at the beginning of the class on the date they are due. DEN students also submit their assignments via DEN systems prior to the beginning of the class on the date they are due. Please follow the instructions provided by the distance education office when you submit your cases.

You can turn in your cases up to one session late for 50% of the credit. Therefore, you must turn in your project reports on-time as the 50% penalty for late submission will seriously jeopardize your success in the class. No credit will be given afterwards.

TESTS:

These are closed book exams limited to the materials that were reviewed in class. Questions are brief and point specific and require very short answers that show your comprehension of concepts, definitions, approaches and tools covered.

Make-up exams are not offered. If you miss an exam, you **MUST** provide written documentation with a legitimate reason for your absence. Once that is done, your grade in the missed exam will be proportional to what you receive on the other test. Under no circumstances can you miss both exams. If you do, you will receive zero points for the midterm and final and, thus, jeopardize your grade in the class.

Homework:

Homework relates to developing ideas for both projects individually. The first homework (3 points) is about developing three lessons (headings and lessons only without examples) from The Solution Path. The second homework (2 points) is about identifying four areas of improvement for your team. Please note the dates that the homework is due and submit it in the same way you submit your cases. Homework will be graded and returned in the next session. Late homework will not be accepted and there will be no exceptions.

Participation

Participation constitutes 10% of your total points and is required by all students and is rewarded. Come to or watch our class on time ready to discuss case studies, readings, papers, and to interact and exchange experiences. Webex participation counts for distance education students. Purposeful email and with class input also constitutes participation. For example, you can share points that have not been raised during class discussions.

Academic Conduct

The School of Engineering (or the Department of Industrial and Systems Engineering) adheres to the University's policies and procedures governing academic integrity as described in SCampus. Students are expected to be aware of and to observe the academic integrity standards described in SCampus, and to expect those standards to be enforced in this course.

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* or to the *Department of Public Safety*. This is important for the safety of the whole USC community.

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 your course instructor (or TA) as early in the semester as possible. DSP is located in STU 301 and is open from 8:30am to 5:00pm, Monday through Friday. Website and contact information for DSP http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html (213) 740-0776 (Phone), (213) 740-6948 (TDD only), (213) 740-8216 (FAX) ability@usc.edu

Schedule

The schedule is provided on the next page. Please note:

- SP stands for “The Solution Path”
- ch stands for chapter and R for reader

Powerpoint presentations on each class will be posted on the DEN website.

Please note that the syllabus may be revised during the term!!

SCHEDULE

Week, Topic, Activity, Assignment Reading

Session 1 (7/1)

Class overview	Syllabus
Why teams? Team stages	
Working effectively with individuals/teams	SP ch3 – lecture notes
Personality testing	SP - appendix

Session 2 (7/6)

Principles of organizing – Organizational Structures – Classical organization - Mechanistic and organic organizations	Reader – Lecture notes
<i>Groups formed and finalized</i>	

Session 3 (7/8)

Contingency theory	Designing Complex Organizations, Galbraith, R
Information processing model of organizational design - The roadmap from functional silos to the horizontal, team-based corporation	Lecture notes
<i>Project 1 outlined</i>	

Session 4 (7/13)

Product development teams	Product Development - Brown-Eisenhardt 1995, R
Collaborative strategy: Vision, mission, values, goals, norms	SP ch5, Lecture notes
<i>Project 1 homework: 3 lessons from TSP- due by 6pm</i>	

Session 5 (7/15)

Leadership, delegation and assigning responsibility, coaching	“What Makes a Leader” Coleman 1998, R
Fundamentals of group facilitation	Lecture notes
Problem solving	Notes and SP ch 3, 4, 7
Case 1 due	
<i>Project 1 group-work: Brainstorming and Prioritization</i>	

Session 6 (7/20)

TEST 1

Fundamentals of group facilitation	Notes and SP ch 3, 4, 7
Problem solving	SP ch1

Session 7 (7/22)

TSP Project presentations

TSP powerpoints due

Peer Evaluations due

Second Project and Team Building

Class notes

Session 8 (7/27)

Cooperation and conflict resolution

Handouts, SP ch3/ch6

Communication

Class notes and measurement instrument

Case 2 due

Project 2 group-work: Basic Evaluation

Session 9 (7/29)

Motivation, Rewards, Incentives

Class notes

Project 2 group-work: Data and Lessons learned

Project 2 homework (individual): 4 ideas for areas of team improvement – due by 6pm

Session 10 (8/3)

Performance Definition, Measurement,
Management

“How the Right Measures Help Teams Excel”,
Meyer 1994, R

Innovation and creativity

sp6 and notes

Taking Action

SP ch7

Project 2 group-work: Brainstorming and Prioritization

Session 11 (8/5)

TEST 2

Session 12 (8/10)

Team Building Project presentations

Project powerpoint due

Peer Evaluations due

ATTENTION: Please note that dates may be changed and adjusted as required/needed!