



International Engineering Management Student Case Competition

Friday October 25th 7:30am - 4:45pm Eastern Time

Team Case Analysis: 7:30am - 12:30pm; Location: TBD

Team Case Presentations: 1:00 – 4:45 pm TBD

Award Announcements: 6:30 – 8:30 pm TBD

Competition held at the

2019 International Annual Conference of the American Society for Engineering Management

Hosted by

October 23rd – 26th, 2019

**Sheraton Philadelphia University City
3549 Chestnut Street, Philadelphia, PA 19104 , USA**

PURPOSE OF THE COMPETITION:

The award will be made annually to the team presentation judged to best represent a feasible solution to a relevant case study problem that incorporates the discipline of engineering management.

COMPETITION / CASE STUDY OVERVIEW:

The case study will represent a complex problem within the field of Engineering Management following the conference theme *A Systems Approach to Engineering Management Solutions*.

Teams will be expected to evaluate the case study in order to accurately define the problem and communicate a recommended solution to applicable stakeholders based on their analysis.

Each team will make a presentation up to 20 minutes in length (with an additional five minutes dedicated for questions and answers) communicating their findings. Each team member will be required to participate in some portion of the presentation.

TEAM COMPOSITION:

Undergraduate Competition: Teams will consist of up to four full time undergraduate members from any university that grants an undergraduate degree in Engineering Management or equivalent.

Graduate Competition: Teams will consist of up to four full OR part time graduate members from any university that grants a graduate degree in Engineering Management or equivalent.

Team member substitutions are allowed up until the day the engineering management case is handed out. If a team member drops out of the competition once the engineering management case has been received, the remaining team members can continue with the competition; if two or more members drop from competition the team is disqualified.

JUDGING CRITERIA:

Judges will view the presentations from a stakeholder's perspective and will evaluate a team's ability to clearly, concisely, and logically communicate:

1. An accurate description of the problem
2. Clearly defined / logical objectives
3. Creative solutions to the problem
4. A meaningful, reliable recommendation
5. A discussion of implementation plans / issues

RESOURCES AVAILABLE:

Reference material is limited to "A Guide to the Engineering Management Body of Knowledge" and "The Engineering Management Handbook" . During the competition teams **may not** use faculty advisor, **internet**, or other human assistance other than the competition coordinator located in the competition room. All electronic devices must be switch to airplane mode PRIOR to the start of the competition. Presentation templates must be loaded prior to the start of the competition and shown to the proctor at the start of the competition.

SUGGESTIONS FOR PRESENTATIONS:

Presentations should be conducted for the problem's stakeholder / decision maker and not for the competition / conference attendees.

Each member will identify themselves, school, major, and their contributions to the group during the competition. Teams will create a presentation using Microsoft PowerPoint and will submit their presentations (via portable memory device) at the stated deadline in accordance with the competition schedule.

SUGGESTED QUESTIONS TO ASSIST TEAMS IN ANALYZING THE CASE:

1. What information must the decision maker know if we only had one slide?
2. What is the problem?
3. What does the recommendation look like?
4. What information do we already know and have?
5. What information are we missing?

6. How can we explain our method or approach?
7. How can we lay out the simple steps of how we intend to solve the problem?
8. How can we show the potential / expected results of our presentation?

SUGGESTIONS FOR FACULTY ADVISORS:

Identify team strengths and identify roles and responsibilities based on these strengths prior to the competition.

Please share with your team members that historically, student competitors do not ensure enough time is invested in understanding the problem. This is an extremely important step and the more time that can be devoted to it will greatly improve the results. The final recommendation should be comprehensive.

SCHEDULE OF EVENTS:

Friday October 25th, 2019

All times are given in Eastern Time

- 7:29:59 a.m. Competitors turn all electronic devices to airplane mode and present student identification.
- 7:38 a.m. Coordinator announces “Rules of Engagement” and answers questions on competition process
- 7:46 a.m. Competitors separate into teams, cases are distributed and competition begins
- 11:30 a.m. Box lunches delivered. Teams may break or continue to work on the case.
- 12:29 p.m. Team Chairs submit an electronic copy of presentation on a portable drive
- 12:30 – 1:00 Break.
- 12:59:59 Teams are randomly selected for order of twenty minute presentations to judges.

Each team member must participate in the presentation. The presentation should be delivered to the panel of judges. The judges will simulate roles as the top management team of the case study’s corporation.

Conference attendees including team faculty advisors are invited to attend all the presentations. Faculty advisors are not allowed to serve as judges. Employees (staff, faculty or students) of institutions represented by a team are not allowed to serve as judges. **TEAM PARTICIPANTS MAY NOT BE IN THE PRESENTATION ROOM EXCEPT DURING THE TIME OF THEIR PRESENTATION.**

The team will be given a five minute warning after fifteen (15) minutes of the presentation. Judges will begin to subtract points after twenty minutes. When the team is finished the competition coordinator will request questions from the judges only. The presentation AND the question and answer session will be completed in 30 minutes or less.

6:30 ~ 9:00 p.m. All participants are required to attend the awards banquet. All participants are required to applaud and sing praises of the judges and the members of the competing teams.

Official team pictures are taken following the awards banquet.

MISCELLANEOUS

Student teams will apply Engineering Management knowledge, teamwork, and presentation skills to resolve a case study problem that spans several functional areas. They will combine knowledge gained from courses, work experiences, and teamwork skills to tackle a real-life engineering management case. They will compete

with other student teams by analyzing the same case that requires a managerial decision based on sound engineering management tools and techniques. Each team will develop solution recommendations and will present their assessment and solutions to a panel of professional judges.

PURPOSE OF CASE COMPETITIONS

Student case competitions are designed to test students' abilities to utilize the knowledge gained through their course work and apply it to an engineering management case that involves the tradeoffs among management strategies, engineering approaches, and cultural expectations (both internal and external to the organization). Teams are judged based upon the quality of their analysis, selection and application of tools/techniques, the soundness of their recommendations, and the professionalism of their presentation.

WHAT'S IN IT FOR THE PARTICIPANT?

Participation in case competitions has many opportunities including:

1. Performance is evaluated by senior level engineering managers, as well as faculty, in the application of tools and techniques acquired in courses to a real life engineering management situation. This not only reinforces learning but it also simulates career building scenarios.
2. Leading a team and/or participating on a team allows the practice and improvement of team working skills; critical skills in the job market and life.
3. Provides a resume building entry and a topic of discussion during interviews. The experience showcases leadership, critical thinking, problem solving, and teamwork. The engineering management case competition tells employers the skills have been practiced and evaluated.
4. Prizes and recognition, 'nuff said!

ENGINEERING MANAGEMENT CASE SELECTION

The case study for the competition is designed by subject matter experts, and reflects actual conditions in industry.

COMPETITION FORMAT

The case and instructions will be given the morning of the presentations. Team members are given approximately five plus hours to read and analyze the case, summarize results, prepare recommendations, create a presentation and practice their delivery of the presentation.

Teams are not allowed to consult on any aspect of the case or presentation with any person who is not a team member. All teams must create a new presentation, and are not allowed to use previously published or otherwise constructed presentations.

Teams having files with a "Created On" date other than the date of the competition will be disqualified.

Once the presentation has been given to the competition coordinator, no modifications are allowed.

All team members must be involved in the delivery of the presentation and should be prepared to present even in the unlikely event of media failure.

The order of teams presenting will be determined by lottery.

JUDGING

The judges will observe each presentation, ask questions to the contestants, and determine the winning team. The evaluation criteria for the presentation are as follows:

- A. *Quality of Analysis*: includes the scope and depth of analysis and the ability to draw valid conclusions from the case.
- B. *Quality of Recommendations*: includes the scope and viability of recommendations as well as their anticipated impact on the organization and its stakeholders.
- C. *Selection and Application of Tools/ Techniques*: includes the usage of appropriate engineering management tools and techniques to the case study.
- D. *Professionalism*: includes communication skills, teamwork, design of presentation materials, and confidence in responding to questions.

The final team scores and rankings will be based on the average scores and rankings of the judges. The results of the judges are final.

CONTACT INFORMATION:

Please address requests for information and questions to:

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