

Team Assignment #6  
**Team Presentation using the Design Process**

**Reading Assignment:**

- Read Chapter 3 (Introduction to Engineering Design) in Engineering Fundamentals – An Introduction to Engineering, 4<sup>th</sup> Edition, by Moaveni
- Lecture – Team Assignment 6
- ASEE Model Design Competition Rules (see link below)

**Team Assignment:**

Read the rules for the most recent year of the ASEE Model Design Competition. The rules are available at the following website: <http://faculty.tcc.edu/PGordy/ASEE/index.html>

**Robot Design:**

- Brainstorm for ideas on a robot design as if your team was planning to compete in the next ASEE Model Design Competition.
- Create sketches of your robot (you might scan them or take quality photos of them for the presentation). Include at least two different views (top and side, for example). Include labels identifying parts on the sketch. Include approximate dimensions (or draw on graph paper with a scale listed).
- Use the track diagram provided in the official rules to decide what path that your robot would take in completing the course.

**Team Presentation:**

**Audience:** Assume that you are giving a presentation to a group that knows nothing about the competition. You need to describe the competition, summarize the key rules, and explain your design.

Create a ***PowerPoint presentation*** satisfying the following requirements:

- Provide the team name and the following information for each team member:
  - Name
  - Engineering discipline (electrical engineering, mechanical engineering, etc.)
  - Transfer plans
- Provide the name of the competition, the date, and the location.
- Provide a general description of the competition.
- Summarize various competition specifications, including:
  - Robot specifications (dimensions, cost, etc.)
  - Track specifications (show a picture of the track with the dimensions)
  - Performance specifications (explain what does the robot needs to do)
  - Scoring (explain the scoring system)
- Describe how you might organize your team into sub-teams (programming, propulsion, etc.)
- Show sketches of your robot (scanned images or quality photos). Discuss the sketches.
- Use the track diagram provided in the official rules and mark it with the exact path that your robot would take in completing the course. Explain your path and your reason for choosing this path.
- Describe your robot's navigation method (line following, dead reckoning, distance sensors).
- Describe your robot's method for accomplishing other specified tasks (such as picking up items, putting items in specified places, etc.)

- Your team will give a 10-minute presentation to the class using the PowerPoint presentation created by the team.
  - Each team member must give part of the presentation
  - Provide the instructor with a printed copy of the presentation (3 slides/page with notes) before the presentation so that the instructor can make comments.
  - The order of presentations will be selected at random, so be ready to go first in case your team is selected as the first team.

Evaluation:

- In addition to the instructor's evaluation of your presentation, each team member must submit:
- Team-Evaluation – evaluate the level of participation by each team member
- Self-Evaluation – evaluate your own level of participation