

Senior Design

CATEGORY OBJECTIVE

Overcome a technical challenge.

REGISTRATION CRITERIA

Four (4) competitors per team. Competitors must be enrolled in the second half of their undergraduate degree.

COMPETITION FACILITIES

- 1 amphitheater (with digital projector)
- 1 workroom per team

COMPETITION PERSONNEL

- 3 judges/clients (minimum): The judges assess team presentations.
- 1 timekeeper: The timekeeper is responsible for ensuring that the competitors stay within the time allotted.
- 1 official: The official presents the problem to the competitors and judges; only the official may respond to questions. The official works with the panel to clarify the problem but does not take part in judging the teams.
- 2-3 volunteers: Volunteers carry out various support tasks.

EQUIPMENT REQUIRED

- All materials and tools will be provided
- Students are allowed to bring their own laptops
- 1 USB key (to store presentations)

PROCEDURE

I. Presentation of Theme

At least seven days (168 hours) prior to the competition, the main theme(s) dealt with during the competition will be announced to the competitors. Moreover, they will receive a list of all required or optional equipment, software, or tools.

2. Presentation of Problem

The problem must be presented to all competitors and judges on the morning of the competition. The category official must provide detailed explanations of what is expected from the competitors, both orally and in writing.

3. Question Period

The competitors then have 20 minutes to ask the category official any questions they may have. Only the time used to ask the questions (not the answers) should be counted.

4. Development of the Solution

The teams will have minimum 8 hours to develop their solution, produce all required deliverables, and prepare their presentation for the judges. All the deliverables must be submitted to the Official before the allotted time expires. Competitors may finish before the end of the allotted time.

5. Rest Period

While not mandatory, it is recommended that competitors be allowed a minimum of six hours to rest, take a shower, and change into clothes appropriate for giving their presentations. The presentations and trials will occur on Saturday.

6. Presentation and Tests

Competitors have 15 minutes to present their designs. The original design, its rationale, a description of the design process, and a critique of the prototype must be presented. The team then carries out two trials. The judges then have a minimum of five minutes to ask presenters questions.

TIMEKEEPING

- Time is halted when a judge asks a question during the Presentation of Problem.
- Time is halted when a judge answers a question during the Presentation of Problem.
- Time is started when all the teams have reached their work areas during Development of the Solution.
- The time remaining must be announced at 1 hour, 30 minutes, and 10 minutes before the end of the allotted time
- The remaining time must be announced 1 minute before the end of the allotted time for the presentation to the judges.
- A visual countdown must be given during the last 30 seconds of the presentation to the judges.
- The question period after the presentation and trial time is not included in the allotted time (watch is stopped).

TEAM ORDER

- Team order for presentations and trials shall be determined randomly.
- Team order shall be disclosed prior to each presentation and trial

RESPONSE TO QUESTIONS

- Only the category official may answer questions regarding rules and procedure.
- During the presentation of the problem, the official shall answer orally and write down the answers provided.
- During the solution-development phase, only questions related to deliverable content shall be answered. No answers shall be provided in response to questions about the problem that might lead to the development of a new approach or that might invalidate a solution.

- During the solution-development phase, answers to questions shall be provided in writing to all teams at the same time. A certain amount of time (e.g. 15 minutes) may be allowed to elapse or a significant number of questions accumulated before responses are provided. A copy of the responses must be provided to the judges prior to the presentations.

ASSESSMENT AND JUDGES

- The panel must have a minimum of three judges.
- The assessment shall be carried out in the audience's presence.
- Feedback forms, from the judges, shall be provided to each team prior to the closing of the competition.

SUMMARY OF ASSESSMENT SCALE

Presentation	60%
<i>Deliverable compliant with expectations</i>	10%
<i>Presentation of the design</i>	5%
<i>Design justification</i>	10%
<i>Critique of the design</i>	15%
<i>Design process</i>	5%
<i>Critique of the prototype</i>	10%
<i>Speaker(s) quality</i>	5%
Testing	40%

