



Engineering Day 2020

Team Physics and Engineering Challenge

Goal:

Describe in detail the properties and behavior of a provided physical system.

Rules/Judging:

1. Multiple physical systems will be presented for the teams to choose from.
2. Teams will be given ten (10) minutes to investigate the systems.
3. Appropriate measuring devices such as balances, stop watches, meter sticks, etc. will be provided.
4. Teams may choose only one system to describe in as much detail as possible.
5. Teams will be given (35) minutes to describe the physical system.
6. Descriptions are to be both qualitative and quantitative.
7. Each team is to produce a qualitative description of the motion or behavior of the system, consisting of several hand written paragraphs.
8. Each team is to produce a detailed quantitative analysis consisting of a detailed mathematical description of the system.
9. All physical principles and laws at play should be identified.
10. Pertinent formulas should be identified.
11. Figures, such as graphs, tables and free body diagrams should be produced.
12. No calculators, computers or reference materials may be used.
13. No more than 3 team members per team.

Score:

Overall score will be determined based on the depth of the description provided by each team and the presence of elements such as correctly identified laws, formulas, figures, and a complete mathematical description.