

Engineering Design Challenge 4.0

The Road To Autonomy

Technical Judging Outline

Technical Assessment

Technical
Assessment (10%)

How well does the rover perform? How professional was our work?

High-score Characteristics

- Reliable and robust design
- Well-executed manufacturing
- Grasp of technical concepts

Low-score Characteristics

- Ineffective attachments and solutions
- Poor quality or fragile rover
- Missing understanding of concepts

Cost Effectiveness

Cost Effectiveness
(10%)

To what extent were we smart in spending money? Did we try and minimize our rover's cost?

High-score Characteristics

- Inexpensive components or materials
- No unjustified redundancy
- Cost overview with justifications

Low-score Characteristics

- Unjustified use of expensive components
- Redundant parts
- Using expensive kits

Design Process

Design Process
(10%)

Can we present design alternatives and justify choice/solutions? What did we base our work on?

High-score Characteristics

- Consideration for more than one design
- Justification for tradeoffs
- Scientific approach to solving challenges

Low-score Characteristics

- Lack of design alternatives
- Final design is not well-studied
- Ignorance of strong/weak points

Creativity & Originality

Creativity &
Originality (10%)

Did we build it ourselves/used something in an unexpected way? Did we come up with a new way to do things?

High-score Characteristics

- Manual manufacturing of rover by team
- Using CAD and/or CAM for the design
- Original ideas, methods, and/or solutions
- Using unexpected material

Low-score Characteristics

- No understanding of manufacturing
- Using readymade kits without changes
- Sticking to traditional methods without consideration for alternatives