



2023 MATE ROV COMPETITION ENGINEERING PRESENTATION SCORING REQUIREMENTS - SCOUT

Safety

Max Points: 12 Weight: 10%

Content

Did our presentation highlight our ROV's safety features and our company's safety philosophy?

Safety Measures

Did we describe other vehicle-specific safety precautions related to tasks?

Did we describe how well the team's safety philosophy covers personnel, equipment, and operational safety?

Team Presentation

Max Points: 28 Weight: 10%

Preparation

Did all of our team members participate in the presentation and Q&A?

Were we well prepared for the presentation?

Delivery

Was our presentation clear, informative, and energetic?

Teamwork

Did we convince the judges that the project was a team effort and that each team member had a role and contributed to the project?

Did we convince the judges that we are a united, inclusive, and supportive company?

Did our company demonstrate self-teaching/mentoring among team members?

Did we acknowledge all donors of funds, materials, and equipment?

Theme/Tasks

Max Points: 8 Weight: 10%

Content

Did we convince the judges that we understand the theme and how the tasks relate to the real world?

Did we convince the judges that we designed and built our ROV specifically to solve the tasks?

Overall Design/Workmanship

Max Points: 16 Weight: 25%

Content

Did we describe how we came up our own ROV design? If we used a kit, did we describe how we thought through the design of the frame, placement of the motors, etc.?

Did we convince the judges that our ROV is sturdy and that it won't easily come apart or unwired and, if a repair is needed, that we can fix it on the pool deck?

Did we give some thought and describe why other people might want to buy and use our ROV?

Did we talk about how we tested the ROV and practiced before the competition?



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System Design

Max Points: 20 Weight: 45%

Engineering Design Rationale

Did we describe an overview of the vehicle as an overall system and its subsystems?

Did we describe the engineering reasoning behind the vehicle systems and components?

Did we show data was used to compare and select from among alternative designs/tooling?

Build vs. buy, new vs. used

Did we explain why we chose to buy certain ROV parts and/or build others?

Did we explain why we chose to re-use certain old parts and/or build others?

Discretionary Points

Max Points: 12 Weight: 100%

Do we have a unique ROV design, tool, or other feature?

Did we design and build every part of our vehicle or did we buy or re-use every single part?

Other (explanation/example is required in comments)

Deductions

Min Points: -12 Weight: 100%

Do the judges think that our teachers, mentors, and parents built most of the vehicle and wrote our presentation for us?

Did we use a lot of pre-built parts without explaining why?

Did we use a lot of parts from previous teams without explaining why?

Final Score

Max Points: 50 + Discretionary & Deductions

SCORING RUBRIC - ALL QUESTIONS (Except Discretionary & Deductions)

Missing: Not included, can't evaluate	0
Needs Work: Effort made, meets some key requirements. Understanding or treatment of key requirements needs more depth. Judges had to question deeply to find answers.	1
Partially Meets Requirement: Response demonstrates understanding and addresses most key requirements. Simple prodding from judges encouraged team to answer.	2
Meets Requirement: Response demonstrates thorough understanding and addresses all key requirements. Team addressed topic without prompting.	3
Exceeds Requirement: Response extends beyond key requirements, demonstrating exceptional depth and breadth of understanding	4

SCORING RUBRIC - DISCRETIONARY POINTS

<i>Novelty, Depth of Understanding, Depth of Analysis, Effectiveness (functions as intended), Quality of Implementation</i>	
None	0
Minor	1
Fair	2
Good	3
Extraordinary	4

SCORING RUBRIC - DEDUCTIONS

<i>Extent to which team relied on outside help, existing work and/or purchased components and services</i>	
None	0
Minor	1
Fair	2
Medium	3
Extreme	4