

2015 MATE ROV Competition Technical Report Rubric

Judge: _____

Class (circle one): NAVIGATOR SCOUT Team#: _____ School Name and #: _____

Technical Report Summary					
Category	Scoring Criteria				Points
Overall Presentation	3 - Excellent	2 - Very Good	1 - Good	0 – Poor or missing	
Basic requirements	Report is 10 pages or less; includes a table of contents; all measurements are in SI units (exceptions include ½ PVC, etc.); excellent attention to grammar, demonstrates a	Report is 10 pages or less; includes a table of contents; most measurements are in SI units (exceptions include ½ PVC, etc.); very good attention to grammar	Report is over or less than 10 pages; includes an inaccurate table of contents; some measurements are in SI units; good attention to grammar, some issues	Report is over or significantly under 10 pages; table of contents missing or inaccurate; measurements not SI units; poor attention to grammar, many typos, etc.	
Title page and Abstract	Includes all elements as specified in the guidelines: Company name, school, club or organization name, city and state, members and roles, name of mentor; abstract 250 words or less and provides an excellent, clear and concise summary of work	Includes most elements as specified in the guidelines: Company name, school, club or organization name, city and state, members and roles, name of mentor; abstract 250 words or less and provides a concise summary of work	Includes some elements as specified in the guidelines: Company name, school, club or organization name, city and state, members and roles, name of mentor; abstract 250 words or less and provides an adequate summary of work	Many specified elements missing; abstract 250 words or less but is not clear nor concise	
Photos of ROV	Photo of complete vehicle included, includes additional photos which fully capture vehicle design, excellent captions accompany photos	Photo of complete vehicle included, includes additional photos which somewhat capture vehicle design, captions accompany photos	Photo of complete vehicle included, additional photos which do not capture vehicle design, captions accompany photos	Photos missing or not of high quality, captions missing	
Report design, professionalism, and attention to detail	Report is extremely well thought through, logically organized and concise; demonstrates an excellent professional view of the company,	Report is well thought through, logically organized and concise; demonstrates a good professional view of the company, some details	Report is acceptable, issues with flow, logic, and/or concision; demonstrates an adequate professional view of the company,	Report is not well written, many issues, not logical, not enough information; completely unprofessional, clearly very little time spent	

	team clearly spent a great deal of time working through details	missing or pieces which could have used more attention	many pieces require more attention to detail	preparing the report	
Budget	3 - Excellent	2 - Very Good	1 - Good	0 – Poor or missing	
Accounting of funds, including donations	Thorough description of budget planning and following, math is accurate, travel estimates to competition seem very reasonable, acknowledgement of donations	Description of budget planning and faltering, math is accurate, travel estimates to competition are reasonable, acknowledgement of donations	Loose description of budget planning and faltering, math has some inaccuracies, travel estimates have issues, no acknowledgement of donations	Poor description, poor use of funds, many math errors, travel unreasonable, no acknowledgment of donations	
Electrical or Fluid Power Diagram					
	Created using CAD or neatly hand-drawn, discloses presence of fuse/circuit breaker, or includes fluid power diagram Total = 3 points	Poorly drawn or prepared electrical diagram (-1 point) Diagram does not indicate presence of fuse/circuit breaker (-1 point) *If fluid power is not used, score as a 1			

Category	Scoring Criteria				Points
Design Rationale					
Presented in clear and logical manner, demonstrates step-by-step planning and design process, describes problem solving and troubleshooting Total = 9 points	Lacking a clear, logical description of how vehicle was built to perform specific tasks (-1 point) Lacking information about decisions on shape (-1 point) Lacking any description of decisions on materials used (-1 point) No description of the planning and design process (-1 point) No description of why design decisions were made (-1 point) Lacking description of how the company brainstormed ideas to solve the mission tasks (-1 point) No description of evaluation of ideas against competing alternatives (-1 point) No description of troubleshooting (-1 point)				
Acquisition and application of technical skills Total = 2 points	Lacking a description of skills acquired (-1 point) Lacking a description of application of skills (-1 point)				
Vehicle Systems	3 - Excellent	2 - Very Good	1 - Good	0 – Poor or missing	
Corporate team memory	Described how the team and vehicle evolution and year's mission contributed to	Describes influences from past team members or vehicle design or if new team, good description of	Little corporate team memory demonstrated or if new team, little description of research to	It was clear that the team did not understand the decision process or only one	

	the design decisions or if new team, excellent description of research conducted to begin the decision process	research conducted to begin the decision process	being the decision process, basically just got lucky	team member understood the vehicle	
Safety	3 - Excellent	2 - Very Good	1 - Good	0 – Poor or missing	
Safety features and philosophy highlighted	Thoroughly describes safety philosophy and specific safety features of vehicle	Describes safety philosophy and safety features of vehicle	Describes safety features of vehicle	Does not describe safety features	
Challenges/Lessons Learned	3 - Excellent	2 - Very Good	1 - Good	0 – Poor or missing	
Describes at least one challenge faced by team and the method used to overcome the challenge, lessons learned – technical or interpersonal	Excellent descriptions of at least one challenge and method provided, excellent description of lesson(s) learned or skills gained	Good descriptions of at least one challenge provided, good description of lesson learned or skill gained	Adequate descriptions of a challenge provided, adequate description of lesson learned or skill gained	Poor or missing descriptions	
Improvements	3 - Excellent	2 - Very Good	1 - Good	0 – Poor or missing	
	Extremely thoughtful and logical discussion of at least one improvement	Thoughtful and logical discussion of at least one improvement	Vague discussion of at least one improvement	Missing discussion of at least one improvement	
Reflections	3 - Excellent	2 - Very Good	1 - Good	0 – Poor or missing	
	Thoughtful, articulate personal or professional accomplishments from competition participation presented as a team or as individual team members	Personal or professional accomplishments provided from competition presented as a team or as individual team members	Only a few individual team members presented personal or professional accomplishments from the competition	Poor or no reflections	
Teamwork	3 - Excellent	2 - Very Good	1 - Good	0 – Poor or missing	
Team assignments and schedule	Company provides an excellent description of the specific team assignments and schedule to design/build the vehicle	Company provides a good description of the specific team assignments and schedule to design/build the vehicle	Vague description of the specific team assignments to design/build the vehicle or schedule or schedule missing	Poor or lacking description of the specific team assignments to design/build the vehicle	

References and Acknowledgements	3 - Excellent	2 - Very Good	1 - Good	0 - Poor or missing	
	Provided a properly documented list of an books, journals, web sites, etc used as sources; well documented contributions of companies, individuals who contributed funds, equipment, and/or technical/moral support	Provided a list of an books, journals, web sites, etc used as sources; documented contributions of companies, individuals who contributed funds, equipment, and/or technical/moral support	Provided a few books, journals, web sites, etc used as sources, not properly documented; poorly documented contributions of companies, individuals who contributed funds, equipment, and/or technical/moral support d;	No references provided; missing documentation of contributions	
Score Sub-Total (50 points max)					

Discretionary Points (3 points max)				
Originality	3 - Excellent	2 - Very Good	1 - Good	Points
Vehicle exhibits unique concepts or innovations	Exceptional innovation described in vehicle design, or other feature	Very clever innovation in vehicle design, or other feature	Interesting innovation in vehicle design, or other feature	
Deductions (-9 points max)				
Deductions	- 3 Extreme	- 2 Moderate	- 1 Minor	
Commercial assistance	Vehicle was designed/created by a commercial company and lack of any justification	Some assistance was provided by a commercial company and some justification	Minor assistance was provided by a commercial company and with justification	
Interference	Significant contribution by coaches, mentors, or parents	Some contribution by coaches, mentors, or parents	Minor contribution from coaches, mentors, or parents	
Overuse of components	Significant overuse of commercial components without adequate justification and/or overuse of re-used components without adequate justification	Overuse of commercial components without adequate justification and/or overuse of re-used components without adequate justification	Some use of commercial components without adequate justification and/or overuse of re-used components without adequate justification	
TOTAL TECHNICAL REPORT SCORE				