

# Engr Communication: Technical Report

1 0 = Yes (1) or No (0)    2 1 0 = 2: Excellent, 1: Good, 0: Poor or missing

|  |                   |
|--|-------------------|
| <b>Overall Presentation</b>  | <b>10 pts max</b> |
| Report is 2 MB or less   | 1 0               |
| Report is 20 pages or less   | 1 0               |
| Measurements are in SI units   | 1 0               |
| Report is well thought out, organized, and professional  | 1 0               |
| Report is "professional" and well written (e.g. attention to spelling)                         | 2 1 0             |
| Report indicates development over the course of time (i.e. is not a last minute product)       | 2 1 0             |
| Report makes good use of references and properly attributes information to its original source | 2 1 0             |
| <b>Title Page Contains</b>   | <b>4 pts max</b>  |
| Project/ROV name   | 1 0               |
| School, club, or team name   | 1 0               |
| List of team members   | 1 0               |
| Names of instructor(s) and/or mentors  | 1 0               |
| <b>Abstract</b>  | <b>3 pts max</b>  |
| Is 250 words or less   | 1 0               |
| Concise and clear summary of the teams work  | 2 1 0             |
| <b>Photos of ROV</b>   | <b>6 pts max</b>  |
| Complete, intact vehicle photo   | 2 1 0             |
| Photo descriptions accompany photos  | 2 1 0             |
| A mechanical drawing or sketch is included (may be of a sub-system)                            | 2 1 0             |
| <b>Budget/Expense Sheet</b>  | <b>7 pts max</b>  |
| Math accurate  | 1 0               |
| Detailed accounting of funds   | 2 1 0             |
| Donations listed   | 2 1 0             |
| Expenditures listed  | 2 1 0             |
| <b>Electrical Schematic</b>  | <b>6 pts max</b>  |
| Neatly hand-drawn or created using CAD   | 2 1 0             |
| Discloses presence of fuse/circuit breaker   | 2 1 0             |
| Clearly represents the electrical system   | 2 1 0             |
| <b>Design Rationale</b>  | <b>8 pts max</b>  |
| Documents features to accomplish missions  | 2 1 0             |
| Presented in a clear and logical manner  | 2 1 0             |
| Demonstrates step-by-step planning process   | 2 1 0             |

|  |                  |    |    |
|--|------------------|----|----|
| A flowchart describes the software flow or why a hardware only approach was selected                                     | 2                | 1  | 0  |
| <b>Vehicle Systems (score one)</b>   | <b>2 pts max</b> |    |    |
| Team presents own, original work   | 2                | 1  | 0  |
| Documents work from commercial companies and/or instructors or mentors   | 0                | -1 | -2 |
| <b>Challenges</b>  | <b>4 pts max</b> |    |    |
| Describe at least one challenge faced  | 2                | 1  | 0  |
| Method used to overcome the challenge  | 2                | 1  | 0  |
| <b>Troubleshooting Techniques</b>  | <b>4 pts max</b> |    |    |
| Explain troubleshooting technique  | 2                | 1  | 0  |
| What was used to identify and solve the problem  | 2                | 1  | 0  |
| <b>Payload Description</b>   | <b>4 pts max</b> |    |    |
| Design and function of payload tools is clearly described  | 2                | 1  | 0  |
| Discussion of tooling alternatives is provided   | 2                | 1  | 0  |
| <b>Future Improvement</b>  | <b>2 pts max</b> |    |    |
| Thoughtful an logical discussion for one improvement   | 2                | 1  | 0  |
| <b>Lessons Learned</b>   | <b>4 pts max</b> |    |    |
| Lesson learned or skill gained relating to the process - technical   | 2                | 1  | 0  |
| Lesson learned or skill gained relating to the process – interpersonal   | 2                | 1  | 0  |
| <b>Description of a scientist and/or research projects that uses ROVs for similar missions to this ROVs design goals</b> | <b>5 pts max</b> |    |    |
| Mentions a scientist or project that uses ROVs in research   | 1                | 0  |    |
| At least two sources cited   | 1                | 0  |    |
| Photos or graphics   | 1                | 0  |    |
| Description is well-written and informative  | 2                | 1  | 0  |
| <b>Reflections</b>   | <b>4 pts max</b> |    |    |
| Personal or professional accomplishments from competition participation  | 2                | 1  | 0  |
| Point of view includes the team as a whole or its individual members   | 2                | 1  | 0  |
| <b>Teamwork</b>  | <b>4 pts max</b> |    |    |
| Team demonstrates team work and ideals behind working together   | 2                | 1  | 0  |
| Team design and built vehicle, particularly electrical and software  | 2                | 1  | 0  |
| <b>Acknowledgements</b>  | <b>3 pts max</b> |    |    |
| List companies, organizations or individuals   | 2                | 1  | 0  |
| Recognizes donations of funds, supplies and time   | 1                | 0  | -1 |

Technical Report Score:

**Discretionary Points**

Bonus points for extraordinary work - grammatically correct, showed extra effort to overcome obstacles, etc.

**5 pts max**

5 4 3 2 1

**Deductions**

Lacks software block diagram or flow chart, if applicable

-2

Over use of appendices

-3

Technical Report Total Score:

**Total Cumulative Score:**

**Total Score:**