

# NEGA RSEF 2022 Project Rubric – ENGINEERING (Senior Division)

Project ID Number: \_\_\_\_\_

<b>CRITERIA</b> <b>For Engineering Projects</b> (and some projects in math or computer science)	<b>FAIR</b>	<b>AVERAGE</b>	<b>GOOD</b>	<b>SUPERIOR</b>
<b>I. Research Problem (10 pts)</b> <ul style="list-style-type: none"> <li>• description of a practical need or problem to be solved</li> <li>• definition of criteria for proposed solution</li> <li>• explanation of constraints</li> </ul>	3	4 5 6	7 8	9 10
<b>II. Design and Methodology (15 pts)</b> <ul style="list-style-type: none"> <li>• exploration of alternatives to answer need or problem</li> <li>• identification of a solution</li> <li>• development of a prototype/model</li> </ul>	7	8 9 10 11	12 13	14 15
<b>III. Execution: Construction and Testing (20 pts)</b> <ul style="list-style-type: none"> <li>• prototype demonstrates intended design</li> <li>• prototype has been tested in multiple conditions/trials</li> <li>• prototype demonstrates engineering skill and completeness</li> </ul>	10 11	12 13 14 15	16 17	18 19 20
<b>IV. Creativity/Originality/Inventiveness (20 pts)</b> <ul style="list-style-type: none"> <li>• project demonstrates significant creativity/originality/inventiveness in one or more of the above criteria (I, II, or III)</li> </ul>	10 11	12 13 14 15	16 17	18 19 20
<b>V. Presentation – Poster (10 pts)</b> <ul style="list-style-type: none"> <li>• logical organization of material</li> <li>• clarity of graphics and legends</li> <li>• supporting documentation well selected &amp; displayed</li> </ul>	3	4 5 6	7 8	9 10
<b>V. Presentation – Interview (25 pts)</b> <ul style="list-style-type: none"> <li>• clear, concise, thoughtful responses to questions</li> <li>• understanding of basic science relevant to project</li> <li>• understanding interpretation and limitations of results and conclusions</li> <li>• degree of independence in conducting project</li> <li>• recognition of potential impact in science, society and/or economics</li> <li>• quality of ideas for further research</li> <li>• for team projects, contributions to and understanding of project by all members</li> </ul>	13 14	15 16 17 18 19 20	21 22	23 24 25
Subtotals				
Judge's Initials _____	Combined Total (100 Point Maximum)			
<b>MANDATORY FORMS REVIEW</b> (Please check forms present at display.)				
These forms are required for <b>ALL</b> projects				
<input type="checkbox"/> Official Abstract Form  <input type="checkbox"/> Form 1 Checklist for Adult Sponsor	<input type="checkbox"/> Form 1A Student Checklist  <input type="checkbox"/> Research Plan/Project Summary		<input type="checkbox"/> Form 1B Approval Form	
These forms are required for certain types of research projects.				
<input type="checkbox"/> Form 1C Regulated Research Setting  <input type="checkbox"/> Form 2 Qualified Scientist  <input type="checkbox"/> Form 3 Risk Assessment	<input type="checkbox"/> Form 4 Human Participants  <input type="checkbox"/> Forms 5A/5B Vertebrate Animals  <input type="checkbox"/> Form 6A Potentially Hazard Bio Agents		<input type="checkbox"/> Form 6B Human/Animal Tissue  <input type="checkbox"/> Form 7 Continuation	