Rubric for Involvement Evaluation

Use the following criteria as the basis for <u>evaluating involvement of the student</u> in implementing the project.

Aspects	Keypoints	Scaling			Score
		1 - 2 (Poor)	**3 - 4 (Moderate)**	**5 (Excellent)**	
Attendance	Student unattendance is<10%				/ 5
Involvement	Student is involved in 90% of project activities	Student is involved < 40% of project activities.	Student is involved < 90% of project activities.	Student is involved > 90% of project activities.	/ 5
	Effort	Did little, almost no work or did all the work. Did not support team members.	Did average amount of work, but could have done more. Support team members, but could helped others more.	Did fair share of work. Supported others in their share.	/ 5
	Contribution to Discussions and Decision	Make little contribution to team discussions and decision. Contribution was of poor quality.	Make average contributions to team discussions and decision. Contribution was of average quality.	Contribution beyond average to the team discussions and decision. Contribution was of high quality.	/ 5
	Team Spirit	Removed from commitment to the team effort, or over bearing and inconsiderate of team	Respected team members, considerate and cooperative, more than half of the time.	Exceptionally helpful, respectful and considerate of other team members.	/ 5
	Dependability	Unreliable, skipped many meeting or arrived late. Generally poor prepared.	Dependable, attended most team meeting, generally punctual prepared more than half of the time.	Exceptionally dependable, always attended meeting on time. Fully prepared.	/ 5

Rubric for Log Book Evaluation

Use the following criteria as the basis for <u>evaluating Log Book</u> of student's project.

Aspects	Keypoints	Scaling			Score
		1 - 2 (Poor)	**3 - 4 (Moderate)**	**5 (Excellent)**	
Log Book	Project Activity Plan/ *Gantt* Chart	Did not perform project activity plan.	Perform planning for project activities using the *Gantt* Chart.	Did not perform project activity plan.	/ 5
	Weekly notes on project activities	Did not record all weekly project's activities in logbook	Record all weekly project's activities in logbook.	Record completely all weekly project's activities in logbook.	/ 5
	Continuous improvement based on feedback by project supervisor	Did not perform continuous improvement based on feedback by project supervisor.	Perform continuous improvement based on feedback by project supervisor.	Perform continuous improvement based on feedback by project supervisor, complete with a comprehensive result and report.	/ 5
	Verification by project supervisor every 2weeks	Students did not showed logbook for verification as scheduled.	Students showed logbook for verification not as scheduled.	Students showed logbook for verification as scheduled.	/ 5

Rubric for Presentation Evaluation

Use the following criteria as the basis for <u>evaluating student's project presentation</u>.

Aspects	Keypoints	Scaling			Score
		1 - 2 (Poor)	**3 - 4 (Moderate)**	**5 (Excellent)**	
Presentation	Content related to implemented project	• Presentation contained little to no valuable material and not related to implemented project.	• Presentation had a good amount of material, benefited and related to implemented project	• Presentation had an exceptional amount of valuable material and was extremely beneficial and related to implemented project.	/ 5
	Use of visual aids	• Student uses superfluous visual aids or no visual aids.	• Student occasionally uses visual aids that rarely support the presentation.	• Student's visual aids explain and reinforce the presentation.	/ 5
	Communication skill	• No effort to make eye contact with audience, merely reads notes. • No enthusiasm. • Audience cannot follow presentation.	• Occasional but unsustained eye contact with audience. • Monotonous tone and/or low volume disengages audience.	• Presenter reads, but presents making constant eye contact with the audience. Presenter does not merely reads. • Body language reflects comfort and enthusiasm interacting with audience. • Appropriate volume of voice. • Audience can follow easily.	/ 5
	Teamwork	• Removed from commitment to the team effort, or over bearing and inconsiderate of team members. • Only one of the members takes over and leads the group. There is no coordination among team member.	• Respected team members, considerate and cooperative, more than half of the time. • There is good balance in the amount of time and content covered by each member. But still have some problems of coordination.	• Exceptionally helpful, respectful and considerate of other team members. • There is good balance in the amount of time and content covered by each member. It is evident that members have rehearsed or at least are coordinated in the delivery.	/ 5

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Rubric for Final Report Evaluation

Use the following criteria as the basis for <u>evaluating Final Report</u> of student's project.

Aspects	Keypoints	Scaling			Score
		1 - 2 (Poor)	**3 - 4 (Moderate)**	**5 (Excellent)**	
Final Report	Follow standard format (table of contents)	• Work fails to follow required report format. • Sequence of information is difficult to follow. No apparent structure or continuity. • Lack of appropriate sections or many items are in the wrong section.	• Report format is generally consistent. • Information is presented in a logical manner, which is easily followed. • Some information is in the wrong section.	• Report format is consistent throughout including heading styles, fonts, margins, white space, etc. • Information is presented in a logical, interesting way, which is easy to follow. • All information is located in the appropriate section.	/ 5
	Abstract/ introduction/ acknowledgement	• Abstract is somewhat vague and/or wordy. • It is somewhat difficult to determine the objective, approach, key results and/or conclusions. • Introduction is vague. It does not support the research and is irrelevant to the area studied. • Acknowledgements and bibliography are inaccurate and incomplete.	• Abstract contains statements of objective, approach, key results, and conclusions. • Introduction is fairly thorough. It somewhat supports the research and is somewhat relevant to the area studied. • Acknowledgements and bibliography are generally thorough. But some minor omissions are noted.	• Abstract consists of concise statements of objective, approach, key results and conclusions. • Introduction is detailed and thorough. It clearly supports the project and is clearly relevant to the area studied. • Acknowledgements and bibliography are thorough and complete.	/ 5

Aspects	Keypoints	Scaling			Score
		1-2 (Poor)	**3-4 (Moderate)**	**5 (Excellent)**	
Final Report	Include graphics/ tables/ diagrams	• Graphics, tables, charts, diagrams, pictures, and/or models are unrelated or offer little support of the work.	• Graphics, tables, charts, diagrams, pictures, and/or models are related. • There is some mislabeling of graphics or design mistakes (e.g., a picture is confusing because it doesn't have a caption).	• The work is well supported by carefully illustrated and useful tables, charts, diagrams, pictures, and/or a model-all properly labeled and captioned.	/ 5
	Clear explanation/ description of the contents	• Explanation and description are incorrect and/or irrelevant; based on • minimal research. Content is minimal OR there are several factual error.	• Explanation and description are complete, accurate, and relevant information; based on adequate research. • Includes essential knowledge about the topic. Knowledge of the text appears to be good.	• Explanation and description are complete, accurate, and relevant information; based firmly on extensive and • careful research. Covers topic indepth with details and examples. Knowledge of the text is excellent.	/ 5
	Include costing/ bill of materials	• Total cost from bill of materials has not been listed and calculated.	• Total cost from bill of materials has been listed and calculated. Item description, quantity, price per unit, and total price have been specified.	• Total cost from bill of materials has been listed and calculated. • Item description, quantity, price per unit, total price, and vendor name have all been specified.	/ 5
	Conclusion/ Impact of Project/ Project further work	• Concluding paragraph and discussion is not apparent.	• Conclusion is partially clear, effective and enhances the impact of the report. • Reflective thinking gives a good overall picture of the project.	• Conclusion is clear, effective and enhances the impact of the report. • Includes suggestions for how the project could be improved and has ideas for further study.	/ 5

Rubric for Model Evaluation

Use the following criteria as the basis for <u>evaluating model</u> for student's project.

Aspects	Keypoints	Scaling			Score
		1 - 2 (Poor)	**3 - 4 (Moderate)**	**5 (Excellent)**	
Content and Concept	The project offers a solution to a problem.	• The project does not offer a solution to a problem.	• The project offers a solution to a problem.	• The project offers the ultimate/ final solution to a problem and improve the efficiency.	/ 5
	The project sources are cited, reliable and replicable.	• The project sources are not cited, reliable and replicable.	• The project sources are cited at least 4 scholarly sources in the field; sources cited were authoritative and relevant to the project.	• The project sources are cited at least more than 4 scholarly sources in the field; sources cited were authoritative and relevant to the project.	/ 5
	The project aligns with the curriculum & standards.	• The project does not align with the curriculum & standards. • The project did not challenge the students to perform much research.	• The project aligns with the curriculum & standards. • The project contains some research but mostly involves technical information taught within the scope of the curriculum.	• The project fulfills the requirement of with the curriculum &meets standards. • A significant portion of the project involves technical information outside the scope of the curriculum.	/ 5
Casing and Layout	The model size is appropriate.	• The model size is inappropriate.	• The model size is appropriate and meets a few criteria of design specification.	• The model size is appropriate and meets the original design specification.	/ 5
	Attractive control panel layout and labeling.	• Unattractive control panel layout and labeling.	• Attractive control panel layout and labeling.	• Control panel has an attractive and creative design, including layout and labeling which makes it easy for handling and operating.	/ 5

Aspects	Keypoints	Scaling			Score
		1 - 2 (Poor)	**3 - 4 (Moderate)**	**5 (Excellent)**	
Casing and Layout	Use good quality material.	• Do not use good quality material.	• Use good quality material.	• Use good quality material. • The material is at economical cost but it still offer high reliability.	/ 5
	Neat wiring layout and finishes.	• Wiring layout and finishing are disorder and messy.	• The wiring layout and finishing looks neat and organized.	• Using proper system, specific tool or component to make wiring and layout looks neat and organized. • The arrangement will make the future task such as troubleshooting easier.	/ 5
Functional	The project works well.	• The project does not working at all.	• The project works well but not fully hundred percent as expected. • There is some problem with reliability.	• The project works well, hundred percent as expected. • Fulfill the design specification. • The project is reliability.	/ 5
	Good safety elements and procedure.	• No safety consideration in the design. • There is an evident showing the project is not safe.	• Consider safety aspect in the project design. • The project is safe.	• The project is proven to be safe and meets requirement of safety standard such as electrical safety standard.	/ 5
	Clear operating instruction manual.	• No operating instruction manual.	• Clear operating instruction manual. • The instruction is easy to understand and follow.	• Attractive, creative and clear operating instruction manual. • The operating instruction manual looks created by profesional designer.	/ 5

Rubric for Innovation and Creativity Evaluation

Use the following criteria as the basis for evaluating student's project presentation.

Aspects	Keypoints	Scaling			Score
		1 - 2 (Poor)	**3 - 4 (Moderate)**	**5 (Excellent)**	
Innovation/ Creativity	Originality	Project contained little to no valuable originality.	Project had a good valuable originality.	Project had an exceptional amount of valuable originality and extremely beneficial.	/ 5
	Adaptation/Enhancement/ modification	Creativity of project is not apparent.	Creativity of project is partially clear, effective and enhances the impact.	Creativity of project is clear, effective and enhances the impact.	/ 5
	Efficiency	No efficiency in term of time, cost, productivity, application and replicability.	Partially efficiency in term of time, cost, productivity, application and replicability.	Efficiency is clear in term of time, cost, productivity, application and replicability.	/ 5

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