



**GOVERNMENT POLYTECHNIC COLLEGE, PERUMBAVOOR**  
**MAJOR PROJECT INTERIM EVALUATION RUBRICS (SPECTRA)**

CO	DESCRIPTION	LEVEL	
CO1	Apply technical knowledge in developing engineering products to simplify day to day conveniences.	Applying	
CO2	Demonstrate capability of self-education and clearly understand the value of achieving perfection in project implementation & completion.	Applying	
CO3	Demonstrate the importance of teamwork and a multi-Disciplinary approach.	Analyzing	
CO4	Demonstrate professionalism with ethics; present effective communication skills and relate engineering issues to broader societal context.	Applying	
CO5	Develop technical documentation and user manual of engineering products.	Analyzing	
CO6	Identify and analyse problems of the society and arrive at appropriate solutions.	Analyzing	

**CO-PO MAPPING**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3		3				
CO2					3		3
CO3						3	
CO4					3		
CO5				3		3	
CO6	3	3	3		3		

**Program Outcomes (POs)**

- Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- Problem analysis:** Identify and analyse well-defined engineering problems using codified standard methods.
- Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
- Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
- Engineering practices for society, sustainability, and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
- Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
- Life-long learning:** Ability to analyse individual needs and engage in updating in the context of technological changes.

CO	DESCRIPTION	LEVEL
CO1	Apply technical knowledge in developing engineering products to simplify day to day conveniences. (PO1 AND PO3)	Applying
<p>Evaluation Parameter (EP)</p> <p><b>EP1: What problem is your project addressing? (Evaluate considering the whole group, all group members will have the same marks) PO1</b></p> <ol style="list-style-type: none"> <li>1. The project does not address any problem or the batch has not started the project. <b>(poor – 0 marks).</b></li> <li>2. The project addresses some problems but the team members are not very clear about the problem. <b>(Satisfactory, 2 marks).</b></li> <li>3. Well identified problem, very clear about the solution. <b>(Excellent, 3 marks)</b></li> </ol> <p><b>Question for evaluation (group)</b></p> <ol style="list-style-type: none"> <li>1. Explain the problem your project is going to address? What is the proposed solution? PO1</li> </ol>		
<p><b>EP2: Explain the solution used in the project? (Evaluate individually, team members will have the different marks) PO3</b></p> <ol style="list-style-type: none"> <li>1. No clarity about the solution. <b>(poor – 0 marks).</b></li> <li>2. The proposed solution is not correct or the student is not very clear about the solution. <b>(Satisfactory, 2 marks).</b></li> <li>3. Well identified solution, the student can explain the solution clearly. <b>(Excellent, 4 marks)</b></li> </ol> <p><b>Question for evaluation (individual)</b></p> <ol style="list-style-type: none"> <li>2. Explain the tools/technology/algorithm of the project? PO3</li> </ol>		
CO2	Demonstrate capability of self-education and clearly understand the value of achieving perfection in project implementation & completion.	Applying
<p><b>EP3: Social significance of the project (Evaluate considering the whole group, all group members will have the same marks) PO5.</b></p> <ol style="list-style-type: none"> <li>1. The project does not address any specific issue. <b>(Poor - 0 marks)</b></li> <li>2. The project addresses some issues of significance but there are better cheaper alternatives available or the team does not have clear understanding about the applications. <b>(Satisfactory - 1marks)</b></li> <li>3. Well defined application of significance. Even if there are better alternatives, the team is very clear about the application <b>(Excellent - 2 marks)</b></li> </ol> <p><b>Question for evaluation (group)</b></p> <ol style="list-style-type: none"> <li>3. Explain the application of the project? (PO5)</li> </ol>		

**EP4: Future scope of the project (Evaluate considering the whole group, all group members will have the same marks) PO7.**

1. Future scope is not explained. **(Poor - 0 marks)**
2. Future scope is presented. The team is not able to explain the scope properly **(Satisfactory - 1 marks)**
3. Future scope of the project is well demonstrated **(Excellent - 2 marks)**

**Question for evaluation (group)**

4. Does the team present future scope in their presentation and report? (PO7)

CO3	Demonstrate the importance of teamwork and a multi-Disciplinary approach.	Analyzing
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**EP5: Ability to follow presentation guidelines and rules focussing on employment. PO6 (Individual performance is evaluated here. Hence batch members will have the different marks)**

Suggested dress code

- a) Light coloured full sleeves shirt and dark coloured pants tucked in for male candidates, decent non glittering dress code for female candidates.
- b) Shoes and belt for males and decent footwear for female candidates.
- c) Well shaved or trimmed beard for male candidates, decent face makeup for female candidates.
- d) Proper hair cut for male candidates and proper hair style for female candidates.

Evaluation parameter

1. The student does not follow dress code as instructed. **(Poor - 0 marks)**
2. The student follows any two of the mentioned code. **(satisfactory - 1 mark)**
3. The student follows all the mentioned code. **(excellent - 2 mark)**

Question for evaluation (individually)

5. Does the student follow instructed dress code?

CO4	Demonstrate professionalism with ethics; present effective communication skills and relate engineering issues to broader societal context.	Applying
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**EP6: Communication skill. PO5 (Individual performance is evaluated here. Hence batch members will have the different marks)**

Evaluation parameter

1. The student is not able to convey any information during presentation or on questioning. **( Poor - 0 marks)**
2. Though the student is able to present or answer questions, information conveyed is not clear. **(satisfactory - 2 mark)**
3. The student is able to make an excellent presentation or able to explain questions that are raised. **(excellent - 4 mark)**

Question for evaluation (individually)

6. Does the student is able to make the presentation or able to answer questions raised?

CO5	Develop technical documentation and user manual of engineering products. (PO4 and PO6)	Analyzing
<p><b>EP7: Current status of the project – PO4. (Group)</b></p> <ol style="list-style-type: none"> <li>The project is not started. <b>Poor - 0 marks</b></li> <li>If the current Status of the project is as follows (Satisfactory – 1 marks)  For Electronics – Design completed, schematic drawing completed, PCB design not completed. For Computer Engineering – design completed, tools finalized, application development not started. For Mechanical – Design completed, Drawings completed, Fabrication not started</li> <li>If the current Status of the project is as follows (Excellent – 2 marks)  For Electronics – Design completed, schematic drawing completed, PCB design completed For Computer Engineering – design completed, tools finalized, application development demonstrable. For Mechanical – Design completed, Drawings completed, Fabrication in the midway</li> </ol> <p>Question for evaluation (group)</p> <ol style="list-style-type: none"> <li><b>What is the status of your project?</b></li> </ol>		
<p><b>EP8: Tools used in preparing presentation and interim report. PO6(Group)</b></p> <ol style="list-style-type: none"> <li>The presentation and interim report are not prepared. (<b>Poor - 0 marks</b>)</li> <li>The presentation is prepared. But not prepared in latex or template is not followed or less than 10 reference or incomplete. (Satisfactory - <b>1marks</b>)</li> <li>The presentation is well prepared. Prepared in latex and template is followed and 10 reference. (Excellent - <b>2 marks</b>)</li> </ol> <p>Question for evaluation (group)</p> <ol style="list-style-type: none"> <li>Are the presentation and interim reports are submitted?</li> <li>Is it prepared on Latex?</li> <li>Are the templated followed?</li> <li>Is there 10 references?</li> </ol>		
CO6	Identify and analyse problems of the society and arrive at appropriate solutions. (PO1, PO2 and PO5)	Analyzing
<p><b>EP9: Literature review. PO2 (Group)</b></p> <ol style="list-style-type: none"> <li>The presentation and interim report do not contain any literature review. (<b>Poor – 0 marks</b>)</li> <li>Though literature review is done, citations and bibliography are not based on papers. (Satisfactory - <b>1 marks</b>)</li> <li>Well organized literature review with proper citations. (Excellent - <b>2 marks</b>).</li> </ol> <p>Question for evaluation (group)</p> <ol style="list-style-type: none"> <li>Does proper literature review included?</li> </ol>		

**EP10: Abstract and conclusion. PO5 (Group)**

1. The presentation and interim report do not contain abstract or conclusion. **(Poor – 0 marks)**
2. Though abstract and conclusion are present, information is not conveyed properly, **(Satisfactory - 1 marks)**
3. Well organized and clear abstract and conclusion. **(Excellent - 2 marks).**

Question for evaluation (group)

12. Does proper abstract and conclusion demonstrateD?