

# ECE295 Milestone 1 (M1): Technical Design Review

Team ID: \_\_\_\_\_

Team Grade: \_\_\_\_\_ / 70

TA: \_\_\_\_\_

Attributes	Unsatisfactory	Satisfactory	Good	Outstanding
<b>Technical Design Document</b>				
<b>Subsystem Overview</b> Student's interpretation of the subsystem	<ul style="list-style-type: none"> <li>No overview given or the overview provided is incomplete and/or unclear</li> </ul>	<ul style="list-style-type: none"> <li>Overview is generic or similar to what was provided in the ICD</li> <li>Subsystems' relevance to the desired operation of the SAR is provided</li> </ul>	<ul style="list-style-type: none"> <li>Overview of the subsystem is clear but not concise</li> <li>Functionality of the subsystem and the importance to the overall SAR functionality is well articulated</li> </ul>	<i>As per good +</i> <ul style="list-style-type: none"> <li>Overview is concise and specific for the subsystem</li> <li>Impact of the subsystem to other subsystems within the SAR is clear, concise and specific</li> </ul>
<b>Input / Output Signals</b> Description of the input and output signals for the subsystem	<ul style="list-style-type: none"> <li>No description is provided for the input and output signals for the subsystem</li> </ul>	<ul style="list-style-type: none"> <li>Inputs and outputs are described as seen in the ICD</li> <li>Understanding of the inputs and outputs are underdeveloped, suggesting a lack of understanding on how to handle the inputs to generate the outputs</li> </ul>	<ul style="list-style-type: none"> <li>Input and output signals are well described</li> <li>Understanding of the inputs and outputs is developed, suggesting the team understands how to handle the inputs to generate the expected outputs</li> </ul>	<i>As per good +</i> <ul style="list-style-type: none"> <li>Inputs and outputs have incorporated the expected parameters from adjacent subsystems or main board interfaces</li> </ul>
<b>Subsystem Design</b> 1. How the input signals are handled 2. How the output signals are generated 3. Key components 4. Schematic	<ul style="list-style-type: none"> <li>Lacks sufficient detail to understand how the inputs are handled and how the outputs are generated</li> <li>Design is expressed as a mere laundry list of components</li> <li>Schematic is incomplete</li> </ul>	<ul style="list-style-type: none"> <li>Provides basic information on how the inputs are handled and how the outputs are generated</li> <li>Component selection / design (RTL) and justifications for those key components is underdeveloped, suggesting an incomplete design</li> <li>Schematic is complete but component description is incomplete</li> </ul>	<ul style="list-style-type: none"> <li>Provides clear, concise and specific details on how the inputs to the subsystem are used to generate the output signals of the subsystem</li> <li>Key components are highlighted, and the selection criteria is justified to meet the requirements of the subsystem</li> <li>Schematic is complete</li> </ul>	<i>As per good +</i> <ul style="list-style-type: none"> <li>Makes a convincing case for the design and component selection using compelling justification of design choices through simulation, calculation or basic testing</li> <li>Alternate components were reviewed, compared, and ranked to determine the best design that would meet the SAR requirements</li> </ul>
<b>Organization</b> 1. Clarity of Structure 2. Paragraph / text design	<ul style="list-style-type: none"> <li>Poorly organized with information in the wrong places</li> <li>Poor choice of paragraph types</li> <li>Paragraphs are internally incoherent</li> </ul>	<ul style="list-style-type: none"> <li>Information appears mostly in a logical order</li> <li>Structure is present but mostly implicit</li> <li>Paragraph choice is appropriate</li> <li>Paragraphs mostly address and expand a single idea</li> </ul>	<ul style="list-style-type: none"> <li>Document is easy to navigate (e.g., contains elements such as headings, labels, captions)</li> <li>Structure is logical (flows) and explicit throughout</li> <li>Effective paragraph choice; well-framed</li> </ul>	<i>As per good +</i> <ul style="list-style-type: none"> <li>Structure greatly aids understanding and effortless reading</li> <li>Well-crafted transitions at the sentence and paragraph level strengthen flow</li> </ul>
<b>Design Review (DR)</b>				
<b>Subsystem Design</b> 1. Completeness 2. Understanding 3. Supporting documentation	<ul style="list-style-type: none"> <li>Subsystem design is not complete or ready for a design review; significant design decisions remain to be made</li> <li>Lack of understanding the subsystem and the requirements for the subsystem</li> <li>OneNote notebook is not used; no clear team documentation</li> </ul>	<ul style="list-style-type: none"> <li>Subsystem design has the major components selected; minor design decisions remain to be made. Full value of a design review cannot be achieved</li> <li>Subsystem requirements are known but not understood as evidenced by the proposed subsystem design</li> <li>OneNote notebook has some information, but is not clear or detailed</li> </ul>	<ul style="list-style-type: none"> <li>Subsystem design is complete and ready for a design review</li> <li>Subsystem requirements are known and understood; the proposed design is feasible and should meet the subsystem requirements</li> <li>OneNote notebook is well used and information is organized, clear, and shows evidence of teamwork</li> </ul>	<i>As per good +</i> <ul style="list-style-type: none"> <li>Supporting evidence (i.e. calculations, simulations, real world tests) are summarized and available during the design review</li> <li>Design is complete and team understands the next steps required to complete the subsystem circuit</li> </ul>
<b>Design Review Preparedness</b> 1. Content 2. Organization	<ul style="list-style-type: none"> <li>Poorly organized with information in the wrong places</li> <li>Not ready to review schematics, simulations or OneNote notebook material</li> </ul>	<ul style="list-style-type: none"> <li>Information appears mostly in a logical order</li> <li>Ready to receive questions and react as the design review begins</li> </ul>	<ul style="list-style-type: none"> <li>Information is all logically organized and readily available when needed</li> <li>Team begins the DR with an overview of the design and the key components. Team guides the design review in a logical manner</li> </ul>	<i>As per good +</i> <ul style="list-style-type: none"> <li>Team has questions prepared to ask the TA during the design review to confirm design choices and to provide insight from past experience.</li> <li>Team is not just reactive, but proactive with the DR</li> </ul>
<b>Q&amp;A</b> 1. Teamwork 2. Engagement (DR and Design Meetings)	<ul style="list-style-type: none"> <li>The team doesn't work well together to answer questions or present information. Q&amp;A is dominated by silence or a single team member</li> <li>Engagement is low in the DR and in previous design meetings</li> </ul>	<ul style="list-style-type: none"> <li>DR is conducted by one or two team members; workload within the meeting isn't equally distributed</li> <li>Some engagement is seen during the DR and in previous design meetings</li> </ul>	<ul style="list-style-type: none"> <li>DR is conducted by all team members and the workload is equally distributed</li> <li>Engagement is seen in the DR but hasn't been seen in previous design meetings</li> </ul>	<i>As per good +</i> <ul style="list-style-type: none"> <li>Engagement has been consistent and high in previous design meetings and continues in the DR</li> <li>All team members are active in the design process</li> </ul>

**Individual Grade: /30**

Requirements	Success Criteria
Vocal delivery	Clearly articulated; audible; natural style of speaking; appropriate pace; minimal verbal fillers
Team dynamics	Good connection with team; team member remains focused, even when not presenting; aids in creating a sense of team unity in the presentation
Knowledge	Has a good understanding of the team's design and individual contributions
Effort	Individual has made clear contributions towards the team's overall effort
Q & A	Clearly spoken; responds directly and concisely to question
Student	Comments
_____ _____/30	
_____ _____/30	
_____ _____/30	
_____ _____/30	

**Greatest Strengths:**

**Areas for Improvement:**