

# EVALUATION RUBRIC FOR PRELIMINARY DESIGN SPECIFICATION

	LEVELS OF ACHIEVEMENT		
CRITERIA			
<b>1. REVISION HISTORY</b> <b>(10pts.)</b>  <b>SCORE: _____</b>	Revision History section in tabular form exists and is complete and current. All tabular fields accurately document revision history, including revision number, date, reviser name, and description of change. This section exists on its own page(s) separate from other sections. (10-8pts.)	Revision History section in tabular form exists and is complete and current. All tabular fields accurately document revision history, including revision number, date, reviser name, and description of change. (7-4pts.)	Revision History section exists, but is not complete, current, and/or in tabular format. This section also may be combined on a page with other document sections. (3-0pts.)
<b>2. PROJECT INTRO / BACKGROUND</b> <b>(10pts.)</b>  <b>SCORE: _____</b>	Project description provides a clearly worded discussion of what the project entails and substantial evidence that the student clearly understands the project. Also included in this section is a discussion of why the project is important and of interest to project sponsor. (10-7pts.)	Project description is adequate but may be lacking some subtle aspects. May appear that the student is just rewriting comments obtained from discussions with faculty advisors or sponsor mentors. Little or no discussion of the significance of the project is provided. (7-3pts.)	Description is incomplete, significant aspects missing, and what actually needs to be done is not clear. Little evidence that the student actually understands the project is provided. (3-0pts.)
<b>3. DESIGN AND ENGINEERING REQUIREMENTS</b> <b>Section 2.3</b> <b>(20pts.)</b>  <b>SCORE: _____</b>	All customer requirements and associated engineering requirements are included. The list of requirements is comprehensive and complete and fully defines what is needed from the project. Engineering requirements do not use ambiguous terminology. (20-15pts.)	Some design requirements do not have engineering requirements associated. Ambiguous terminology is used in engineering requirements e.g. words like big, better, nice, good, etc. (15-7pts.)	Design requirements are not explained. Design Requirements are not formatted as a list. Requirements are mostly vague and incomplete. Requirements do little to actually describe what is needed from the project There are less than 7 design requirements listed. (7-0pts.)
<b>4. COMPETITIVE ANALYSIS</b> <b>Section 2.2</b> <b>(30pts.)</b>  <b>SCORE: _____</b>	Competitive Analysis section includes evaluations for 15 or more individual products (row) and 7 or more product characteristics (column). Each block in block diagram has at least two correlating entries. At least 3 products are system level comparisons. (30-20pts.)	Competitive Analysis section includes evaluations for a minimum 12 individual products (row) and minimum 7 product characteristics (column). Each block in block diagram has at least one correlating entry. At least 3 products are system level comparisons. (20-10pts.)	Competitive Analysis section includes evaluations for a minimum 9 individual products (row) and minimum 7 product characteristics (column). Some comparisons are at the system level while others are at the block level. (10-0pts.)
<b>5. BLOCK DIAGRAM AND DESCRIPTION</b> <b>Section 4.1</b> <b>(50pts.)</b>	Block diagram is excellent. Adequate number of blocks exist, all signals (internal and external) and connections are defined (mechanical, electrical, and programming). Signal definitions are in a tabular format. (50-40pts.)	Block diagram includes and adequate number of blocks, and at least in includes two of; all external connections are defined, all internal lines with protocols are defined, blocks cover adequate scope for beginning design e.g. no further decomposition is required. (40-20pts.)	Block diagram is missing or is unsatisfactory. (20-0pts.)
<b>6. PROJECT SOLUTION DELIBERATION</b> <b>Section 3.1</b> <b>(20pts.)</b>  <b>SCORE: _____</b>	Multiple possible solutions are described fully and completely. Several of the designs are feasible and could potentially solve the design problem. A final solution is present and supported by a short feasibility analysis. (20-15pts.)	Multiple possible solutions are described, but the reasoning behind selecting or deselecting them is not clear or could use elaboration. An intended solution is evident, but not supported. (15-7pts.)	No final design solution is suggested, or reason behind decisions is not presented. No other possible solutions are discussed. (7-0pts.)

<p><b>7. CLARITY AND CONCISENESS (20pts.)</b></p> <p>SCORE: _____</p>	<p>Text is exceptionally clear, concise, and focused; main ideas stand out, and supporting details and references are effective and relevant. Writing is straightforward and free of “padding” with no unnecessary repetition of information. (20-15pts.)</p>	<p>Text occasionally lacks clarity, conciseness, and/or focus, but main ideas are identifiable. Some of the supporting details and references are limited, irrelevant, or overly general. Writing may be wordy or repetitive at times. There is no colloquial language in the document. (15-7pts.)</p>	<p>Text consistently lacks clarity, conciseness, and/or focus; main ideas must be identified by inference. Supporting details and references are largely absent or ineffective. Writing is excessively wordy/repetitive or contains non-professional references e.g. I, we, etc. (7-0pts.)</p>
<p><b>8.ORGANIZATION (10pts.)</b></p> <p>SCORE: _____</p>	<p>Text contains effective sequencing and paragraph breaks, and the writing is easy to follow. Writing includes smooth, effective transitions among sentences, paragraphs, and ideas. Details fit where placed. (10-7pts.)</p>	<p>Attempts at sequencing and appropriate paragraph breaks are evident, but the order or relationship among ideas may occasionally be unclear and hard to follow. Some transitions work well but others are stilted and formulaic. Headers and footers are present but not complete. (7-3pts.)</p>	<p>Without effective sequencing and paragraph breaks, the text lacks coherence and the organization seems haphazard and disjointed. Placement of details is ineffective. Document does not contain proper header or footer sections. (3-0pts.)</p>
<p><b>9. CONVENTIONS (20pts.)</b></p> <p>SCORE: _____</p>	<p>Writing demonstrates excellent control of standard writing conventions and uses them effectively to enhance communication. Errors are so few and minor that the reader can easily skim over them unless specifically searching for them. (20-15pts.)</p>	<p>Writing demonstrates moderate control of standard writing conventions (punctuation, spelling, capitalization, grammar). Significant errors do not occur frequently. Minor errors, while noticeable, do not impede readability. (15-8pts.)</p>	<p>Writing demonstrates limited control of standard writing conventions (e.g., punctuation, spelling, capitalization, grammar and usage). Errors impede the text’s readability. Page numbers and/or numbered section headings are missing. Figures and tables are not properly referenced and consecutively numbered. (7-0pts.)</p>
<p><b>10. GLOSSARY AND CITING SOURCES (10pts.)</b></p> <p>SCORE: _____</p>	<p>The Glossary section provides informative definitions of ambiguous terms and acronyms used in the report. Definitions of cross disciplinary terms are included. All citations are referenced both by number and type. In text citations are correlated to bibliography. (10-7pts.)</p>	<p>The Glossary section provides informative definitions of ambiguous terms and acronyms used in the report. All borrowed material has been acknowledged with specific in-text citation using IEEE or ASME format. (7-3pts.)</p>	<p>The Glossary section provides adequate definitions of only the most ambiguous terms and acronyms use in the report. Cross disciplinary definitions exist, but may be incomplete. References and bibliography do not adhere to IEEE or ASME style guidelines. (3-0pts.)</p>