Preliminary Design Review (PDR) Rubric

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| **Impact of Project**   * Economic * Added Capacity * Address Pressing Need | **Proficient-8**  Clearly identifies who will benefit from the project and how. Including economically, adding capacity to organization, and addressing a pressing need. | **Basic-4**  Somewhat identifies who will benefit from the project and/or how. Including economically, adding capacity to organization, and addressing a pressing need. | **Unacceptable-1**  Does not identify who will benefit from the project and/or how. Including economically, adding capacity to organization, and addressing a pressing need. |
| **Project Design**   * Specifications * Design Decisions * Subsystem/component Identification * Prototyping * Innovation | **Proficient-5**  Excellent definition of problem and decomposition into subsystems, proposes correct level of design detail, strong analysis supporting well-articulated decisions, excellent prototype plan, creativity & innovation is apparent, excellent incorporation of standards. | **Basic-3**  Fluent with problem ID and specifications, good decomposition of system and detail defined for subsystems, most key decisions supported by analysis, balanced contributions, good innovation, relevant standards addressed. | **Unacceptable-1**  Poor definition of problem, jumped to solutions and conclusions without logic, connection of design decisions to requirements very weak. No specifications, highly unbalanced analysis & team contributions, relevant standards ignored, inappropriate tests to validate design. |
| **Technical Content**   * Appropriate Modeling/Testing * Constraints * Cost Analysis * Proposed Solutions | **Proficient-10**  Ideal level of technical content, innovative, clearly & accurately explained. Strong analysis, excellent application of economics & modern tools to design. | **Basic-5**  Good level of relevant technical content, fairly clear and accurate. Very good level of appropriate analysis, including economics. | **Unacceptable-1**  Confusing, lacks sufficient detail, or provides excessive, irrelevant details. Shallow modeling work. Unclear and inaccurate. Poor understanding of economics. |
| **Presentation/Slides**   * Organization * Graphics/Presentations * Clarity | **Proficient-4**  Logical sequence, coherent, good transitions. Images relevant, accurate, clear, very professional w/ appropriate detail. | **Basic-3**  Organized but may be slightly hard to follow at times, has transitions. Readable, understandable with minimal guidance. | **Unacceptable-1**  Illogical sequence, poor or nonexistent transitions. Presentation sparse, difficult to read or understand, inaccurate; may include far too much text. |
| **Verbal Communication**   * Organization * Graphics/Presentations * Clarity * Question/Answer | **Proficient-4**  Frequent eye contact, appropriate volume & pacing, very professional and prepared verbal presentation, excellent Q&A, command and understanding. | **Basic-3**  Occasional eye contact, with some reliance on notes, may appear underprepared. Q&A shows mixed depth of design and problem. | **Unacceptable-1**  No eye contact, may appear to be simply reading, monotone voice, grammatical errors. Q&A mistakes, indicates missing the big picture. |
| **Time** | **Proficient-4**  10 minutes ± 30 seconds | **Basic-2**  8 minutes ≤ X ≤ 12 minutes | **Unacceptable-1**  7 minutes ≤ X ≤ 13 minutes |

**Notes:**