

**MSD I Deliverables Checklist**

Individual/Team: **P08002**

1/3/2008

Total Score: **27**

\* Scores: use whole points only (no partial points)

Deliverable (weight)	Max. Score	Score*	Excellent/Very Good	Good/Acceptable	Barely acceptable	Unacceptable	Comments, Target, Date	
<b>Customer Needs</b> (expectations should be defined with sponsor/advisor during weeks 1-3). (TEAM GRADE)	3	3	Customer needs are complete and prioritized, are not solutions, and have been logically grouped. (3 points)			Customer needs are incomplete or involved little customer input, or do not accurately reflect customer desires. (0 points)	39455	Planning
<b>Design Specifications</b> (expectations should be defined with sponsor/advisor during weeks 1-3). (TEAM GRADE)	3	3	Complete list of measurable outcomes, mapping of needs to quantitative specs. (3 points)			Design specifications are not complete, are not defined in engineering terms, or poorly mapped. (0 points)	39455	
<b>MSD I Project Plan</b> (includes finalized schedule and associated deliverables such as Roles & Responsibilities, 1-Page Project Summary, and Organizational Chart). (TEAM GRADE)	3	3	All items are included and complete, including task delegation. (3 points)			Items are missing or incomplete. (0 points)	Project plan: I'd like to see an earlier concept review where you review the concepts (not the engineering details w/the customer. Also, 1-page summary deliverables should be deliverables to the customer.	
<b>Concept Generation and Evaluation</b> (TEAM GRADE)	3	3	Creative concepts were generated at the system & subsystem level, and evaluated against customer-oriented criteria and competing products. (3 points)	Valid concepts were developed but some customer criteria were not addressed or competitive benchmarking was sketchy at best. (2 points)	Key customer needs were addressed but many were left unaddressed, or evaluation process was not followed. (1 point)	Minimal concept development or key customer needs unaddressed, reliance on only a few ideas; evaluation process not defined or followed. (0 points)	concepts - good job 1/10/08	Concept Development
<b>Concept Improvement and Selection</b> (TEAM GRADE)	3	2	Team clearly took advantage of the evaluation process to improve or combine existing concepts or to uncover fixable weaknesses, and the selection process was structured and effective. (3 points)	The team showed some ability to use the evaluation process to improve on original concepts or combine one or more concepts, and a selection process was structured and followed. (2 points)	The team made minimal efforts to improve on original concepts during evaluation process, and the selection process was adhoc. (1 point)	The team did not take advantage of any opportunities to use concept evaluation to improve existing ideas, and a selection process was not followed. (0 points)	1/26/2008	
<b>System-Level Design</b>	4	3	Systems architecture, subsystems, and interfaces are clearly defined and consistent with selected concepts. (4 points)	Architecture is defined and consistent with selected concepts, but some subsystems and/or interfaces are not well defined. (3 points)	Architecture is incomplete, and many subsystems and/or interfaces have yet to be defined. (1-2 points)	Architecture is undefined and subsystems are questionable; system design is nonexistent. (0 points)	1/26/2008	System Level Design
<b>Engineering Analysis</b>	4	3	Modeling and/or simulation necessary for system-level design is complete, including accurate operating conditions and input parameters. (4 points)	Some modeling/simulation still remains incomplete or must be re-run. Critical work is complete or nearly complete. (3 points)	Some critical analysis still remains unfinished or is questionable. (1-2 points)	Engineering analysis has not been done or results have been interpreted inaccurately; functionality is in doubt. (0 points)	1/26/2008	
<b>Risk Assessment (high technology) and Proof-of-Concept</b>	4	3	High-risk technologies have been identified, and breadboard/ simulation has demonstrated feasibility of system-level design. Risks for cost and schedule have been identified and assessed. (4 points)	High-risk technologies have been identified, but some work remains to demonstrate feasibility. Risks for cost and schedule have been identified and partly addressed. (3 points)	Some high-risk technologies have not been identified, or concepts have not been proven. Cost and schedule risks have not been identified. (1-2 points)	Many risks have not been identified; feasibility work is questionable. (0 points)	1/26/2008	
<b>Concept/System Design Review Execution</b>	3	3	Design review(s) held with appropriate attendees, all key issues were discussed, notes and action items are documented. (3 points)			Design review was not held or did not address key issues. (0 points)	1/26/2008	
<b>Bill of Materials</b>	3	1	BOM is complete, and long lead time items and vendors have been identified. (3 points)	BOM is partly complete - some specifics still remain to be defined. (1-2 points)		BOM is incomplete, most items not specified. (0 points)	1/26/2008	Detailed Design
<b>Drawings/Schematics</b>	5	0	All drawings for parts to be manufactured are complete, assembly drawings demonstrate that system assembly is feasible. (5 points)	Most drawings or schematics are complete, assembly drawings are nearly done. (3-4 points)	Some drawings are complete, others are not done or require modification. (1-2 points)	Few, if any, drawings or schematics exist beyond hand sketches or concept drawings. (0 points)		
<b>Feasibility Analysis</b>	7	0	Significant analysis has been done to demonstrate feasibility of all systems/components. (6-7 points)	Most design features have convincing support, some require further work. (4-5 points)	Many design features require further analysis to demonstrate feasibility. (2-3 points)	Little analysis has been done to demonstrate feasibility. (0 points)		
<b>Risk Assessment/Mitigation</b>	3	0	Risks have been thoroughly (re)assessed and mitigation plans are in place for all key (high tech) risks. Impact to cost & schedule are clear. (3 points)	Mitigation plans are in-place for most of the key risks but a complete risk analysis has not been done. (0-1 points)		Mitigation plans are not in place and risks have not been adequately (re)assessed. (0 points)		
<b>Knowledge &amp; Understanding of Design</b>	7	0	Thorough and in-depth understanding is evident of the design (system & relevant subsystems) and rationale for design decisions and tradeoffs. (6-7 points)	Good understanding is evident of the design and rationale for most design decisions and tradeoffs. (4-5 points)	General comprehension of the design is evident but rationale for decisions is not solid and tradeoffs are not well understood. (2-3 points)	Superficial understanding of the design is evident at either the system or subsystem level. Rationale for specific design decisions and tradeoffs is poorly understood, if at all. (0 points)		
<b>Plan to Meet Customer Needs/Engineering Specifications</b>	5	0	Sufficient evidence is presented to demonstrate that customer needs and design specs will be met. (5 points)	Team demonstrated that most customer needs and design specs will be met. (3-4 points)	Team demonstrated that some needs and specs will be met, but others require significant further analysis. (1-2 points)	Many questions remain as to whether needs and specs will be met. (0 points)		
<b>Detailed Design Review Execution</b>	5	0	Design Review was very well planned and executed with appropriate attendees. All subsystems discussed, key issues addressed, notes and action items documented. (5 points)	Design Review execution was acceptable but was weak in one or more areas: breadth of participants, preparation, thoroughness, or documentation. (1-4 points)		Design Review was not held or was poorly executed: key subsystems were not reviewed, key issues were not addressed, little/no preparation or documentation. (0 points)		
<b>Project description and high level customer needs</b> (TEAM GRADE)	2	0	The team provided a clear summary of the project, including high level customer needs. (2 points)	Aim of the project is unclear, or customer needs are not outlined at an appropriate level. (1 point)		Team did not explain what is to be accomplished with the project. (0 points)		
<b>Description of selected concept</b> (TEAM GRADE)	2	0	The team provided a clear, concise outline of the selected concept. (2 points)	Selected concept is presented, but key features are not clear. (1 point)		The team did not make it clear what the final concept would be. (0 points)		

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High risk assessment and summary of design review(s) <i>(TEAM GRADE)</i>	2	0	The team provided a concise summary of prior design reviews and analyses with key results - risks identified, problems noted, solutions proposed, etc. <b>(2 points)</b>	The team provided design review summary information, but not appropriately (e.g., too much detail, incomplete summary). <b>(1 point)</b>		The team did not provide any summary of prior design reviews. <b>(0 points)</b>		
Current State of Design <i>(TEAM GRADE)</i>	2	0	Audience has a clear picture of where team is - specs met? On budget? On time? Problems & proposed solutions? <b>(2 points)</b>	Team addressed some concerns of meeting specifications, schedule, and budget. <b>(1 point)</b>		Team did not address current state of design. <b>(0 points)</b>		
Ability to communicate detailed design information effectively (written, graphical, and oral)	2	0	Very effective written and verbal communication. <b>(2 points)</b>	Acceptable but could have been more effective slides or verbal communication. <b>(1 point)</b>		Poor preparation and ineffective communication. <b>(0 points)</b>		
Schedule for MSD II <i>(TEAM GRADE)</i>	2	0	Schedule is complete and accounts for ordering, assembly, test, revision, and documentation. <b>(2 points)</b>			Schedule is not addressed or is missing important tasks, or is unrealistic. <b>(0 points)</b>		
Preliminary Test Plan (formal document) <i>(TEAM GRADE)</i>	2	0	Preliminary test procedures are defined for key specs, along with equipment needed. <b>(2 points)</b>			Test plan has not been specified. <b>(0 points)</b>		
Design History File on EDGE <i>(TEAM GRADE)</i>	5	0	All documents and files are up-to-date, complete, and available on EDGE. <b>(5 points)</b>	Most files are up-to-date and complete. <b>(3 points)</b>		Many files are missing, incomplete, or not up-to-date. <b>(0 points)</b>		
Class and Within-Team Participation	16		Grade based on weekly status reports, logbook, and weekly contributions to team activities <b>(10 points)</b> ; plus peer reviews and Guide assessment of participation and contribution <b>(6 points)</b> .					
<b>Total:</b>	<b>100</b>	<b>27</b>						

Mid-Project Review

Documentation