16-450

Robotics Systems Engineering

	Missing	Poor	Fair	Good	Excellent
System	No overall system	Description present but doesn't	Description is missing a significant	Description is is missing some small	The overall system is described clearly and
Description	description	really say anything	area	aspect or is too long	succinctly.
Use Cases	Use cases are missing	Use cases do not provide any insight into the system design	Use cases cover the basic cases only	Use cases are well done, but some obvious and important cases are missing	Use cases provide clear insight into the system and cover a wide range of possible interactions.
Concept of Operation	No ConOps specified	ConOps does not specify how the system is expected to function	ConOps is confusing and/or underspecified	ConOps well specified, but some aspect is weak.	Concept of operation clearly and succinctly specifies how the exhibit will work.
Subsystem Descriptions	Subsystems are not described	Subsystems descriptions provide hardly any information about how the system is designed	Subsystem descriptions have significant omissions	Subsystems are well specified, but there are some minor issues, like a critical component not specified.	All subsystem descriptions provide a clear idea of each subsystem and any critical component is identified.
Physical Sketch	No physical sketch of the system is present	Sketch is a jumble and very hard to use to understand the design.	Basic sketch is presented but some significant areas are underspecified or unclear	Sketch is well done, but some areas are confusing or do not have enough detail.	Sketch is very clear, providing significant insight about the design.
Architecture Diagram	No architecture diagram present	Diagram exists, but is virtually useless	A basic diagram is present, but there are some significant omissions	Diagram is well presented, but some aspect is missing or unclear	Architecture diagram clearly specifies how the system is configured with relationships identified.
Trade Studies	No trace studies performed	Trade studies are minimal and do not help the design process	Trade studies are basic and provide some insight to the design, but there are some significant holes		Trade studies present for all major design decisions and clearly identify reasons for choices. If no choice is made, a prototyping plan is identified.
Deployment Plan	No deployment plan specified	Plan is very minimal and not very useful	Plan has some significant holes, but the overall idea is there	Plan is well specified, but some aspect was overlooked	Plan clearly specifies how the exhibit will be integrated and installed and the museum.
Level of Detail	Document does not describe a design	Document does a very poor job of specifying anything	Document is mostly complete, but is missing some major ideas.	Document could use some more information in one section or goes into too much detail in parts.	Document reaches an appropriate level of detail where system is well described but there is not too much component level detail.
Design Relative to Requirements	There is no referenced relationship to requirements	The is only minimal connection to the requirements	Significant justification based on requirements is missing	Most of the design is traceable to the requirements, but some areas are missing.	All design desisions are traceable to appropriate requirements and priorities are clearly defined
Engineering Practices	Document does not contain a revision history or referencing	Document is either missing a revision history or nothing is referenced.	Document contains a revision history and some references, but they are minimal.	Document contains a revision history but references are a little light	Document contains a revision history, and proper references to both external documents and internal sections
Readability/ Organization	Document is a jumble and impossible to follow	Document is legible, but many spelling, grammatical or logical errors make it difficult to follow.	Organization is confusing or prose is convoluted, making the document difficult to understand	Document is well organized, but there are some areas that are confusing. Also, document could be too long and repetitive.	There is a logical flow to the document and prose is clear and concise.