



NASA Advanced MBSE Course Alignment

Level 4 Modeling Lead

Skill Acquired	AMBSE1	AMBSE2	AMBSE3	AMBSE4	Additional Description
Understand concept of MBSE	X				What is MBSE and why could it be useful? When should I use it?
Aware of Different Languages	X				SysML vs LML vs AML vs frameworks like DoDAF and UPDM
Being able to read a diagram	X				Need to read a diagram in the tool the project uses. Usually SysML.
SysML Literate	X				Read the SysML language.
Able to Model basic elements / diagrams in a MBSE tool	X				Model behavior/operations, structure/architecture, requirements, and simple parametric calculations.
Use MBSE for SE	X				You cannot have MBSE without SE. Everyone should learn what a ConOps or a requirements verification matrix (for instance) look like in a model. Modelers should know how to actually create these artifacts.
Follow Modeling Plan / Strategies	X				Follow CM and other processes already laid out for the model. This may include using tools like Teamwork Cloud, Jira, or Git.
Show/"surface" information from the model	X				
Able to open someone else's model and navigate, add to	X	X		X	Use another model to gain the information that you need. Add some more detail to a pre-existing model within the model.
Advise on Infrastructure		X			What servers, tools, libraries, personnel, etc. are needed to support the project's MBSE implementation?
Develop Modeling Plan / Strategies		X			Includes model CM and processes for adding or deleting information.
Integrating Models		X		X	MBSE and other discipline models should be able to send information between each other. This may be accomplished through scripting, other tools like ModelCenter, or through data standards.
Create Patterns / Templates		X		X	Create templates for others to base their models off of. This is more like copying and editing.
Create Profiles / Metamodels		X		X	Create basic starter models for others to immediately build from. This is more like general instructions and structures for people to expand.
Use / Integrate other models		X		X	Use info pulled in or taken out from other models. This is less about doing the connecting and more about sending information back and forth in pre-established channels.
Scripting		X	X		Use languages like Python, Matlab, Java, Jython, etc. to program features into the tools that they do not currently have. This is for both internal analysis and sending data out (and the subsequent return of that data) for other tools to analyze.
Creating Models				X	Use MBSE tools to create a model of your own design. This could build upon existing foundational elements or be completely novel.