

## Systems Engineering and Architecture: Principles, Models, Tools, and Applications

July 17-21, 2017

Lead instructors: Edward Crawley, Bruce Cameron, Dov Dori

Monday	Tuesday	Wednesday	Thursday	Friday
8:30	8:30	8:30	8:30	8:30
Introductions (Crawley)	Concept (Cameron)	Representing Architecture in a Tradespace (Cameron)	Intermediate Project Presentations, Feedback (Crawley and Dori)	Final Project Presentations and Feedback (Crawley and Dori)
9:00	9:30	10:00	9:30	
System Thinking (Crawley)	Participant Project Review (Cameron and Crawley)	Exercise: Tradespaces (Cameron)	Complexity Management in OPM (Dori)	
11:00	10:30	11:00	11:00	11:00
Architecture Overview (Crawley)	Architectural Decisions (Cameron)	Modularity and Architecture (Cameron)	Role and Deliverables of the Architect (Crawley)	Course Summary and Awarding of Certificates (Crawley and Dori)
Noon	Noon	Noon	11:30	
Lunch	Lunch	Lunch	Lunch	12:30: Adjourn
1:00	1:00	1:00	1:00	
Form in Architecture (Crawley)	What is a System? A Model? (Dori)	Structural and Procedural Links (Dori)	Modeling Cyber-Physical Systems and Risk with OPM (Dori)	
2:00	2:00	2:00	2:00	
Exercise on Form Representation (Crawley)	Introduction to OPM (Dori)	DSM as a Representation, Including Interfaces (Crawley)	Case Study (Crawley)	
2:30	3:00	3:00		
Function in Architecture (Crawley)	Strategy + Marketing Impact on Architecture (Cameron)	DSM Exercise (Crawley)		
4:00	4:00	4:00	4:00	
Exercise: Producing first Architecture Diagram (Cameron)	Strategy + Marketing Influence Exercise (Cameron)	Coached Session on Project Diagrams (Crawley and Dori)	DoDAF, SysML, and OPM (Dori)	
5:00	5:00	5:00	5:00	
Adjourn	Adjourn	Adjourn	Adjourn	
<i>Read SA Ch. 1, 2*</i>	<i>Read SA Ch. 4,5,6*</i>			

\*Crawley, E., Cameron, B., Selva, D. [System Architecture: Strategy and Product Development for Complex Systems](#). Prentice Hal, 2015 (included in tuition).