



Integration Planning Course

Ensure effective & efficient integration

By Dr. Leah Goldin

Introduction:

Integration in general is the act of combining parts into an integral whole. System integration requires not simply that components be put together, but also that the components, when assembled, are verified to ensure they perform as advertised. Integration of a system happens when the finished components are ready for assembly into sub-systems and packages, and what needs to be done in order to achieve robust system behavior.

The content and purpose of integration tests will have been defined beforehand in the earlier planning stage, to determine which aspects of the product are to be tested in what way.

This course in Integration planning focuses on integration planning and strategy to ensure effective and efficient system integration.

Objectives:

At the end of this course attendees will be able to:

- Understand the benefits of Integration planning
- Apply techniques for integration strategy
- Generate an integration plan
- Evaluate integration environments

Audience:

Integration & Testing Engineers, System Engineers, HW/SW Engineers, Project Managers

Challenges & Method:

A. Integration concepts

We'll start by learning about integration definitions and inherent issues of process integration as part along system development lifecycle.

B. Integration & System Engineering

Understanding the background of System Engineering is the basis for integration concepts and concepts integration.

C. Integration strategy

There is a balance to be found between the thoroughness and cost of the integration testing activities early in project lifecycle, and the desired quality of the product

D. Integration planning & system architecture

Based on the system structure and portioning, the v-model is used to define verification required for integration, along with identification of resources needed for integration environment, to enable the integration tests and evaluation of results.



Agenda:

1	Introduction & Process	a. System Integration technical, human, and organizational drivers. b. Process integration: planning and specialty of reliability, maintainability, LSI, environment, safety, etc.
2	Integration & Structure	c. System architecture vs. Work breakdown structure d. Workshop: WBS and Product Tree
3	Integration & Verification	e. Integration and Verification: partitioning and decomposition, modularity, V-model,
4	Integration Planning	f. Integration strategy and planning g. Workshop: Integration Plan

About the Instructor:

Leah Goldin, CEO of Golden Solutions <http://thegoldensolution.com/>

Dr. Goldin is an independent consultant specializing in Requirements Engineering, System Engineering and Software Engineering, Process and Quality.

In her career, Dr. Leah Goldin developed embedded systems, and filled various management and technical roles, including development, verification and integration, SQA and process improvement. The companies she has worked for include Rafael, IAI, MBT, Comverse, NICE Systems, NDS, Sapiens, Mercury/HP, Given Imaging, Orbotech, etc.

Dr. Goldin divides her time between consulting to high-tech companies and teaching; she is a senior lecturer in Afeka College at the Software Engineering and System Engineering departments, and was the Head of the Software Engineering Department at Shenkar College.

Dr. Goldin received her Ph.D. from the Technion Computer Science department, where her research focused on Requirements Engineering. She is a senior member of IEEE, and currently serves as the Chair of the Israeli Chapter of the IEEE Computer Society.