



System Integrity Course **Design for System Integrity**

By Dr. Leah Goldin

Introduction:

A system is an assemblage of subsystems cooperating as a whole. Integrating a system involves physical interfaces along with linking together different systems and software applications physically or functionally, to act as a coordinated whole. A key element in the management and control of a systems development is the knowledge of the baseline configuration at any point within the process. The baseline refers to the elements that constitute the system, the configuration items.

This seminar in System Integrity focuses on what happens during the process of Product Integration, including integration preparation, assembly and delivery.

Objectives:

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

- Learn the process of product assembly and delivery
- Understand the benefits of integrity based on Configuration Management
- Apply techniques for system interfaces management and control
- Learn about readiness for assembly and 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. Integrity & Configuration Management

Configuration management is a process that is concerned with identification, control and traceability of these baselines. Effective configuration management is used to ensure that the status of each item is fully understood.

C. Interface Compliance & Assembly

Interface development and management are the basis for product assembly success

D. Product Integration

We'll learn to observe the Big Picture of product integration, i.e., preparation, assembly and delivery that are the in product integration



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	Integrity	c. System Integrity: Configuration Management, baseline and change control
3	Interfaces	d. Interface Development: Interface management, Interface Control Documents (ICD), e. Workshop: Interface Requirements Specifications (IRS)
4	Integration Testing	f. Software Integration vs. System Integration g. Workshop: Integration environment setup
5	Product Integration (PI)	h. Prepare for product integration, Ensure interface compatibility, Integration environment and procedures
		i. Assemble Product Components and Deliver the Product, Confirm readiness and Evaluate assembled product components, Package and Deliver

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, Converse, 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.