

Mastering Systems Integration; Course Overview

by *Gerrit Muller* TNO-ESI, University College of South-Eastern Norway

e-mail: gaudisite@gmail.com

www.gaudisite.nl

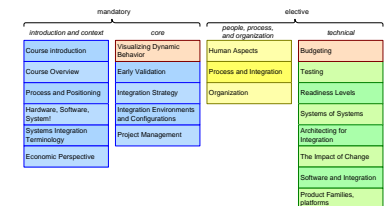
Abstract

Course overview of the course Systems Integration.

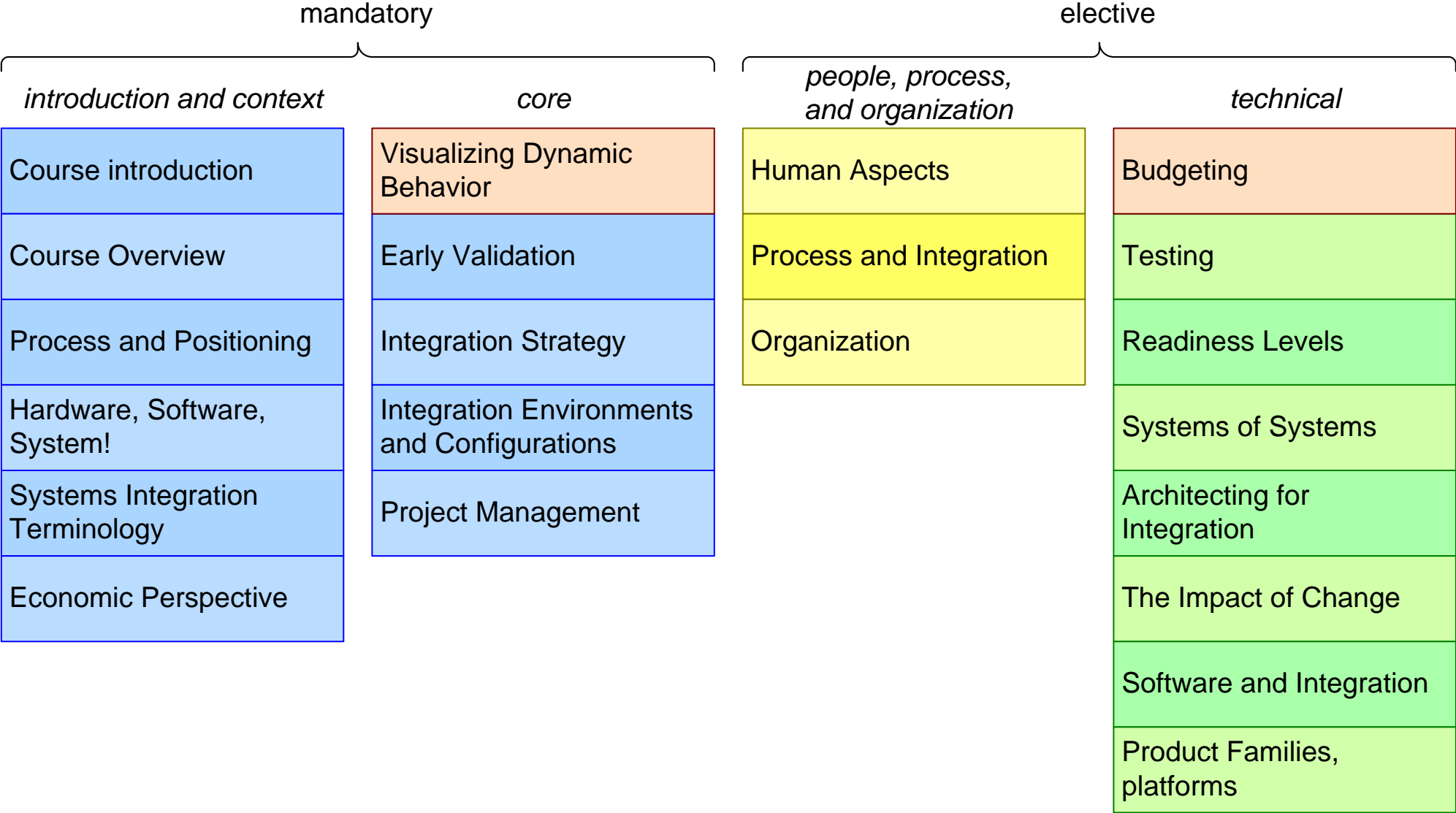
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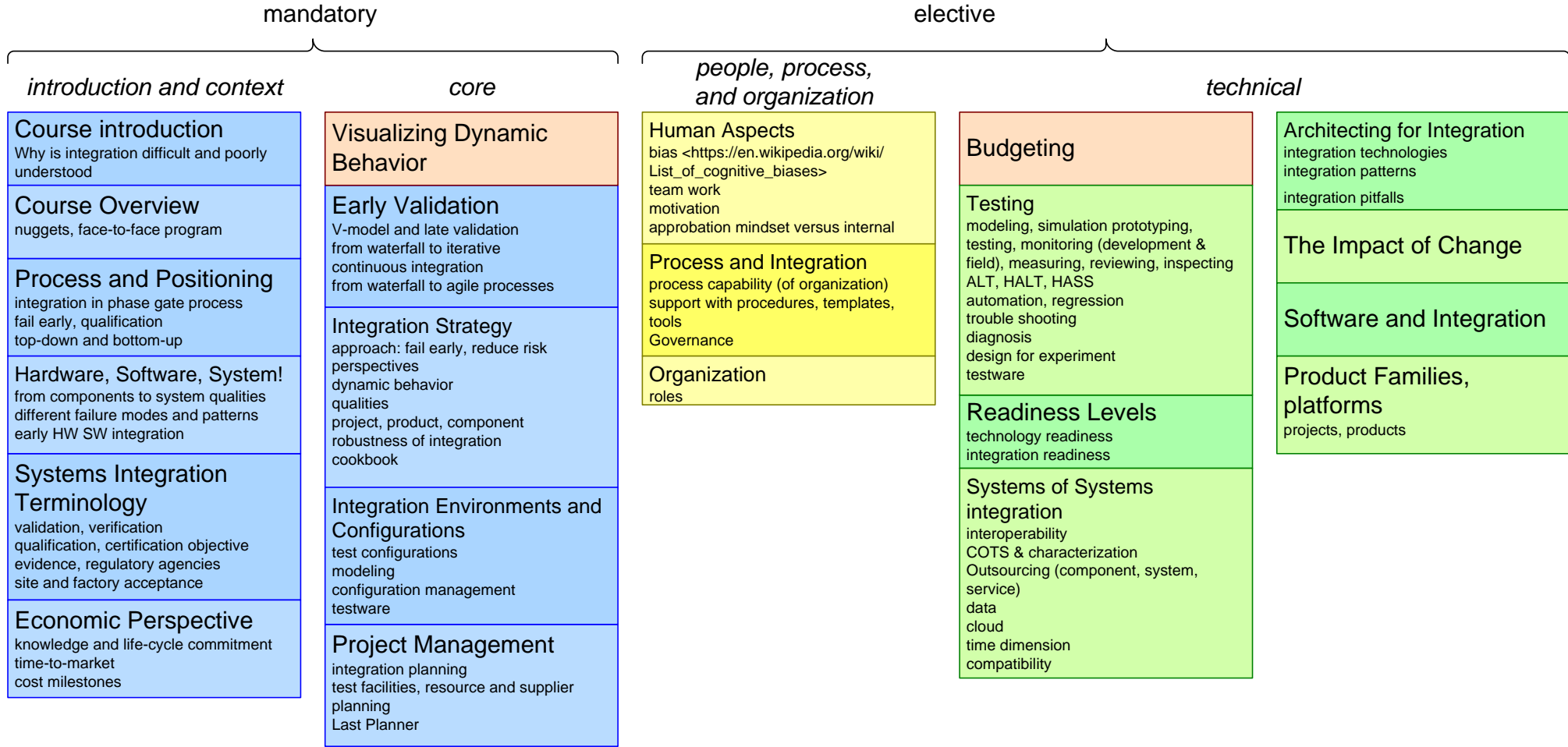
August 16, 2025
status: draft
version: 0.5



Nuggets Course Mastering Systems Integration



Content per Nugget



Assignments in Face-to-Face Module

System Specification

- determine **KPPs** and their quantified specification
- assess **risk** of KPPs caused by volatility, uncertainty, complexity and ambiguity
pick one **high-risk** KPP to elaborate
- describe **typical use** (including circumstances in the **context**) related to KPP

System design

- make system, SW, and HW **block diagrams** (parts, interfaces, connections)
- model **dynamic behavior** resulting in the KPP
- map **dynamic behavior** on **block diagrams** and **budget**: quantify contributions to KPP
- re-assess **risks** of KPP

Reflection and Evaluation

- identify **tensions** or **gaps** in processes, organization, people, tools, instrumentation, context knowledge, etc. for executing the integration.

Systems Integration Plan

- determine an incremental **integration sequence** to measure the KPP as early as possible
- assess for the parts contributing to the KPP
 - **fitness for purpose** in customer context
 - **integration configurations** and **testware**
 - **supplier** and **logistics** status
 - **technology readiness**
 - **development** and **resource** status
- Identify **tensions** with development, logistics status, and availability of testware
and transform the sequence in a **(PERT) plan** with required resources and **integration configurations**
- assess **robustness** of the plan
- capture results in presentation

3-Day Face-to-Face Schedule

	day 1	day 2	day 3
9:00	course intro	early validation	integration strategy
10:00	systems integration intro	make system, SW, and HW block diagrams (parts, interfaces, connections)	determine an incremental integration sequence to measure the KPP ASAP
11:00	case discussion	dynamic behavior	project management
12:00	systems integration context	model dynamic behavior resulting in the KPP	assess integration configurations and testware, supplier and logistics status, technology readiness ,
13:00	determine KPPs and their quantified specification	lunch	lunch
14:00	lunch	reflection and discussion	and development and resource status
15:00	reflection and discussion	budgeting	reflection and discussion
16:00	assess risk of KPPs caused by volatility, uncertainty, complexity and ambiguity	map dynamic behavior on block diagrams and budget . quantify contributions to KPP	identify tensions and transform sequence into a (PERT) plan
17:00	describe typical use (including circumstances in the context) related to KPP	re-assess risks of KPP	present, discuss, reflection and discussion
	reflection and discussion	reflection and discussion	

4-Day Face-to-Face Schedule

	day 1	day 2	day 3	day 4
9:00	course intro	early validation	project management	elective
10:00	systems integration intro	make system, SW, and HW block diagrams (parts, interfaces, connections)	re-assess risks of KPP	identify tensions and transform sequence into a (PERT) plan
11:00	case discussion	dynamic behavior	determine an incremental integration sequence to measure the KPP ASAP	elective
12:00	systems integration context	model dynamic behavior resulting in the KPP	readiness levels, systems of systems, elective	reflection and discussion
	determine KPPs and their quantified specification		reflection and discussion	
13:00	lunch	lunch	lunch	lunch
14:00	reflection and discussion	reflection and discussion	assessment integration configurations and testware, supplier and logistics status, technology readiness , and development and resource status	elective
15:00	assess risk of KPPs caused by volatility, uncertainty, complexity and ambiguity	integration strategy environments and configurations		assess robustness of plan
16:00	describe typical use (including circumstances in the context) related to KPP	map dynamic behavior on block diagrams and budget : quantify contributions to KPP		make and give presentation to management
17:00	reflection and discussion	elective	elective	reflection and discussion
		reflection and discussion	reflection and discussion	

<i>people, process, and organization</i> <ul style="list-style-type: none"> human aspects process and integration organization 	<i>technical</i> <ul style="list-style-type: none"> budgeting testing systems of systems 	<ul style="list-style-type: none"> architecting for integration impact of change software and integration product families, platforms
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electives