

# Architecting System Performance; Course Overview

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

e-mail: `gaudisite@gmail.com`

`www.gaudisite.nl`

## Abstract

Course overview of the course Architecting System Performance.

### Distribution

This article or presentation is written as part of the Gaudí project. The Gaudí project philosophy is to improve by obtaining frequent feedback. Frequent feedback is pursued by an open creation process. This document is published as intermediate or nearly mature version to get feedback. Further distribution is allowed as long as the document remains complete and unchanged.

October 20, 2017  
status: preliminary  
draft  
version: 0.3

1. Course introduction	8. Emerging Behaviour	15. Measuring Performance
2. Managing system performance	9. Budgeting	16. Resource Management
3. Course didactics	10. Modeling Paradigms	17. Greedy and Lazy Pattern
4. Connecting breadth and depth	11. Applications and Variations	18. Scheduling
5. Performance Modeling	12. Model Analysis	19. Robust Performance
6. Level of Abstraction	13. Reasoning Approach	20. Bloating, Waste, and Value
7. Visualizing Dynamic Behavior	14. Defining Performance	

# Nuggets Architecting System Performance

1. Course introduction	8. Emerging Behaviour	time-oriented performance	
2. Managing system performance	9. Budgeting		
3. Course didactics	10. Modeling Paradigms		
4. Connecting breadth and depth	11. Applications and Variations		
5. Performance Modeling	12. Model Analysis		
6. Level of Abstraction	13. Reasoning Approach		
7. Visualizing Dynamic Behavior	14. Defining Performance		
			15. Measuring Performance
			16. Resource Management
			17. Greedy and Lazy Pattern
		18. Scheduling	
		19. Robust Performance	
		20. Bloating, Waste, and Value	

# Assignments in Face-to-Face Module

0. *elevator case*

supersystem

system

subsystem

1. *sketch the problem*  
goal

use case

key performance  
parameters

main  
concepts

critical  
technologies

2. *make conceptual model of the current situation*

- model dynamic behavior
- model 0-order kpp using functions (as simple as possible)
- quantify contribution to kpp using observed data

3. *explore customer and business relevance*

- develop story
- model workflow and performance
- model customer value as function of kpp

4. *make conceptual model of potential solutions*

- model the foreseen solution
- model & compare 2 alternative solutions

5. *list questions and uncertainties, reformulate problem and goal, and formulate gaps and options*

6. *develop an elevator pitch to report you findings and recommendations to management*