

# Mastering Systems Integration; Course Material

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## Abstract

Listing the course material for the course Systems Integration

### Distribution

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logo  
TBD

The Systems Integration course is partially derived from the Systems Integration and Test course developed at *TNO-ESI* by *Teade Punter, Frans Beenker, and many others.*

# Introduction

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*core*

Mastering Systems Integration; Introduction

<http://gaudisite.nl/info/MSIintro.info.html>

*optional*

# Course Overview

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*core*

Mastering Systems Integration; Course Overview

<http://gaudisite.nl/info/MSloverview.info.html>

*optional*

# Process and Positioning

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*core*

Mastering Systems Integration; Process and Positioning

<http://gaudisite.nl/info/MSIprocessAndPositioning.info.html>

*optional*

SESA /SARCH Module 01, System Architecture Context

<http://gaudisite.nl/info/ModuleSystemArchitectureContext.info.html>

*core*

Course Systems Integration; Hardware, Software, System

<http://www.gaudisite.nl/info/MSIhardwareSoftwareSystem.info.html>

*optional*

Tutorial Software as Integrating Technology in Complex Systems

<http://gaudisite.nl/info/TutorialSoftwareAsIntegratingTechnology.info.html>

*core*

Course Systems Integration; Terminology

<http://www.gaudisite.nl/info/MSIterminology.info.html>

*optional*

Understanding Objective Evidence: (What It Is and What It Definitely Is Not),  
by Denise Dion

[http://www.eduquest.net/Advisories/EduQuest%20Advisory\\_ObjectiveEvidence.pdf](http://www.eduquest.net/Advisories/EduQuest%20Advisory_ObjectiveEvidence.pdf)

List of Cognitive Biases, Wikipedia:

[https://en.wikipedia.org/wiki/List\\_of\\_cognitive\\_biases](https://en.wikipedia.org/wiki/List_of_cognitive_biases)

*core*

Mastering Systems Integration; Economic Perspective

<http://gaudisite.nl/info/MSIeconomicPerspective.info.html>

*optional*

Simplistic Financial Computations for System Architects.

<http://gaudisite.nl/info/SimplisticFinancialComputations.info.html>



# Visualizing Dynamic Behavior

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*core*

Visualizing Dynamic Behavior

<http://gaudisite.nl/info/VisualizingDynamicBehavior.info.html>

*optional*

Creating an A3 Architecture Overview; a Case Study in SubSea Systems by Gerrit Muller, Damien Wee, and Martin Moberg; INCOSE 2015 in Seattle, WA, USA

[http://gaudisite.nl/INCOSE2015\\_MullerEtAl\\_SubseaOverviewA3.pdf](http://gaudisite.nl/INCOSE2015_MullerEtAl_SubseaOverviewA3.pdf)

*core*

Course Systems Integration; Early Validation

<http://www.gaudisite.nl/info/MSIearlyValidation.info.html>

*optional*

System Integration How-To

<http://www.gaudisite.nl/info/SystemIntegrationHowTo.info.html>

Save Money by Investing In Models; Failing Early is More affordable Than Failing Late

<http://gaudisite.nl/SaveMoneyInvestInModelsSlides.pdf>

Light Weight Architectures; The way of the future?

<http://gaudisite.nl/info/LightWeightArchitecting.info.html>

*core*

Course Systems Integration; Project Management

<http://gaudisite.nl/info/MSIprojectManagement.info.html>

*optional*

Combating Uncertainty in the Workflow of Systems Engineering Projects

INCOSE 2013, Barry Papke and Rick Dove

*core*

Course Systems Integration; Testing

<http://www.gaudisite.nl/info/MSItesting.info.html>

*optional*

What is wrong with Reliability Engineering, by R.W.A. Barnard, Proceedings of INCOSE 2008 in Utrecht.

Highly accelerated life test

[https://en.wikipedia.org/wiki/Highly\\_accelerated\\_life\\_test](https://en.wikipedia.org/wiki/Highly_accelerated_life_test)

# Readiness Levels

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*core*

Course Systems Integration; Readiness Levels

<http://www.gaudisite.nl/info/MSIreadinessLevels.info.html>

*optional*

From TRL to SRL: The Concept of Systems Readiness Levels

CSER 2006, Brian Sauser et al.

Technology Readiness Levels

[https://en.wikipedia.org/wiki/Technology\\_readiness\\_level](https://en.wikipedia.org/wiki/Technology_readiness_level)

*core*

Mastering Systems Integration; System of Systems

<http://gaudisite.nl/info/MSIsystemOfSystems.info.html>

*optional*

J. Dahmann and K. Baldwin. 2008. "Understanding the Current State of US Defense Systems of Systems and the Implications for Systems Engineering." IEEE Systems Conference 2008 in Montreal, 2008.

Boardman, J. and B. Sauser, System of Systems - the meaning of of, in IEEE/SMC International Conference on Systems of Systems Engineering. 2006, IEEE: Los Angeles.

Gorod, A., White, B.E., Ireland, V., Gandhi, J.S., and Sauser, B., (editors) "Case studies in System of Systems, Enterprise systems, and Complex Systems Engineering", CRC Press, 2014.

*core*

Course Systems Integration; Software and Integration

<http://www.gaudisite.nl/info/MSIsoftwareAndIntegrationinfo.html>

*optional*

Tutorial Software as Integrating Technology in Complex Systems

<http://gaudisite.nl/info/TutorialSoftwareAsIntegratingTechnology.info.html>