



## COURSE SYLLABUS

# Enterprise Architecture and IT Architecture, 7.5 credits

*Enterprise Architecture and IT Architecture, 7,5 högskolepoäng*

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<b>Course Code:</b>	TEAR27	<b>Education Cycle:</b>	Second-cycle level
<b>Confirmed by:</b>	Dean Mar 1, 2016	<b>Disciplinary domain:</b>	Technology (95%) and social sciences (5%)
<b>Valid From:</b>	Jan 1, 2017	<b>Subject group:</b>	DT1
<b>Version:</b>	1	<b>Specialised in:</b>	A1N
<b>Reg number:</b>	JTH 2016/1202-313	<b>Main field of study:</b>	Informatics

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### Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding

- demonstrate comprehension of enterprise architecture, information system architecture and technology architecture
- show familiarity with enterprise architecture management
- display knowledge of research trends in the areas relevant for enterprise architecture and it architecture

Skills and abilities

- demonstrate skills of creating a model of EA using modern standards and tools
- demonstrate the ability to create a high-level requirements specification and design description for an information system based on an EA model

Judgement and approach

- demonstrate an understanding of how EA and IT architecture can contribute to business and IT alignment

### Contents

The course provides the knowledge and skills of applying a holistic and systemic perspective on enterprises and enterprise architecture (EA). In general, it will address EA in order to capture and structure relevant components for describing an enterprise, including its business and operation model, organizational structure, business processes, data, applications and technology - as well as the processes used for development of the EA as such. A number of architectural layers will be explained, e.g. the business architecture, the information architecture, the solution architecture, and the technology architecture. Enterprise Architecture Management (EAM) will be introduced as one of the key activities to keep the IT of an organization aligned with the business challenges and activities. Methods, standards and tools will be covered to construct and analyse conceptual enterprise models addressing various organizational design problems from different modelling perspectives. Examples of such perspectives are goals, processes, concepts,

information, and enterprise information architecture. A connection will be established between to IT architectures and services and cloud computing.

The topics covered in the course include:

- Enterprise architecture and enterprise architecture management
- Business and IT alignment
- Enterprise modelling, methods, languages and modelling processes
- EA standards such as TOGAF and ArchiMate
- Business model impact on enterprise architecture
- Design thinking for enterprise architectures
- Information system architecture and technology architecture
- IT architectures based on services and cloud computing
- EA as a tool to guide requirements specifications and design descriptions

### **Type of instruction**

The teaching is conducted in English.

### **Prerequisites**

Passed courses at least 90 credits within the major subject in Informatics, Computer Science, Computer Engineering, Interaction Design (with relevant courses in web programming). Proof of English proficiency is required (or the equivalent).

### **Examination and grades**

The course is graded 5,4,3 or Fail.

The final grade will only be issued after satisfactory completion of all assesments.

The final grade for the course is based upon a balanced set of assesments.

Registration of examination:

Name of the Test	Value	Grading
Written examination	3 credits	5/4/3/U
Assignments	4.5 credits	5/4/3/U

### **Course literature**

Modeling Enterprise Architecture With TOGAF by Philippe Desfray, Gilbert Raymond, Philippe Desfray, Morgan Kaufmann Publishers, 2014.

The literature list for the course will be provided one month before the course starts.