

# IT Architecture Management

Module Code: IAMG\_E

| Module Type    | Admission Requirements | Study Level | CP | Student Workload |
|----------------|------------------------|-------------|----|------------------|
| see curriculum | none                   | BA          | 5  | 150 h            |

| Semester / Term | Duration              | Regularly offered in | Language of Instruction and Examination |
|-----------------|-----------------------|----------------------|---|
| see curriculum  | Minimum<br>1 semester | WiSe/SoSe            | English                                 |

## Module Coordinator

Prof. Dr. Sebastian Lempert (IT Architecture Management)

## Contributing Courses to Module

- IT Architecture Management (DLBCSEITPAM02)

## Module Exam Type

### Module Exam

Study Format: myStudies  
Exam, 90 Minutes

Study Format: Distance Learning  
Exam, 90 Minutes

### Split Exam

## Weight of Module

see curriculum

## Module Contents

- Basic Terms and Foundations of IT Enterprise Architectures Management
- IT Application Portfolio Management
- Architecture Governance
- Modeling of IT Enterprise Architectures
- Frameworks using TOGAF as an Example
- Reference Models and Sample Catalogues

**Learning Outcomes****IT Architecture Management**

On successful completion, students will be able to

- describe and explain the basic principles of IT strategy, governance, and architecture management, differentiating between them.
- explain and differentiate the typical activities of IT architecture management, their interrelationships, and their dependencies.
- explain suitable models of IT architecture management, distinguish between them, and explain their intended purpose.
- explain and describe selected IT architectural frameworks as well as reference models and sample catalogues.

**Links to other Modules within the Study Program**

This module is similar to other modules in the field of Computer Science and Software Development

**Links to other Study Programs of the University**

All Bachelor Programmes in the IT & Technology field.

# IT Architecture Management

Course Code: DLBCSEITPAM02

| Study Level | Language of Instruction and Examination | Contact Hours | CP | Admission Requirements |
|-------------|---|---------------|----|------------------------|
| BA          | English                                 |               | 5  | none                   |

## Course Description

In addition to concrete IT projects, such as the development of a new IT system or the introduction of standard software, a strategic management system for organizational-wide IT infrastructure – that is, for all IT hardware and software systems – must be used. Strategic management is the responsibility of the IT enterprise architect, who operates IT architecture management. Their task is to strategically align IT infrastructure with an organization's business and IT strategy. This course covers the typical concepts, methods, procedures, and IT models of architecture management.

## Course Outcomes

On successful completion, students will be able to

- describe and explain the basic principles of IT strategy, governance, and architecture management, differentiating between them.
- explain and differentiate the typical activities of IT architecture management, their interrelationships, and their dependencies.
- explain suitable models of IT architecture management, distinguish between them, and explain their intended purpose.
- explain and describe selected IT architectural frameworks as well as reference models and sample catalogues.

## Contents

1. Basic Terms and Foundation for the Management of IT Enterprise Architectures
  - 1.1 IT Enterprise Architecture
  - 1.2 Goals of Enterprise Architecture Management
  - 1.3 Processes in the Management of IT Enterprise Architectures
2. IT Application Portfolio Management
  - 2.1 IT Application Portfolio Management Overview
  - 2.2 Application Manual
  - 2.3 Portfolio Analysis
  - 2.4 Development Planning

3. Architecture Governance
  - 3.1 Organizational Structure
  - 3.2 Policy Development and Enforcement
  - 3.3 Project Support
4. Modeling of IT Enterprise Architectures
  - 4.1 Models in the Context of IT Architecture Management
  - 4.2 Forms of Documentation for Processes and Applications
  - 4.3 Forms of Documentation for Systems and Technologies
5. Frameworks Using the Example of TOGAF
  - 5.1 Fundamentals and Use of IT Architecture Frameworks
  - 5.2 Overview and Categories of EAM Frameworks
  - 5.3 The Open Group Architecture Framework (TOGAF)
6. Reference Models and Sample Catalogues
  - 6.1 Architecture Reference Models
  - 6.2 EAM Design Sample Catalogue

**Literature****Compulsory Reading****Further Reading**

- Ahlemann, F., Messerschmidt, M., Stettiner, E., & Legner, C. (2012). Strategic enterprise architecture management. Challenges, best practices, and future developments. Springer-Verlag.
- Perroud, T., & Inversini, R. (2013). Enterprise architecture patterns: Practical solutions for recurring IT-architecture problems. Springer.

**Study Format myStudies**

|                                  |                               |
|----------------------------------|-------------------------------|
| <b>Study Format</b><br>myStudies | <b>Course Type</b><br>Lecture |
|----------------------------------|-------------------------------|

|   |                  |
|---|------------------|
| <b>Information about the examination</b>  |                  |
| <b>Examination Admission Requirements</b> | <b>BOLK:</b> yes |
| <b>Type of Exam</b>                       | Exam, 90 Minutes |

|                         |                      |                 |                  |                          |                    |
|-------------------------|----------------------|-----------------|------------------|--------------------------|--------------------|
| <b>Student Workload</b> |                      |                 |                  |                          |                    |
| <b>Self Study</b>       | <b>Contact Hours</b> | <b>Tutorial</b> | <b>Self Test</b> | <b>Independent Study</b> | <b>Hours Total</b> |
| 90 h                    | 0 h                  | 30 h            | 30 h             | 0 h                      | 150 h              |

|  |   |
|--|---|
| <b>Instructional Methods</b>   |   |
| <input type="checkbox"/> Learning Sprints®<br><input checked="" type="checkbox"/> Course Book<br><input type="checkbox"/> Vodcast<br><input checked="" type="checkbox"/> Shortcast<br><input checked="" type="checkbox"/> Audio<br><input checked="" type="checkbox"/> Exam Template | <input type="checkbox"/> Review Book<br><input type="checkbox"/> Creative Lab<br><input type="checkbox"/> Guideline<br><input checked="" type="checkbox"/> Live Tutorium/Course Feed<br><input type="checkbox"/> Reader<br><input checked="" type="checkbox"/> Slides |

**Study Format Distance Learning**

|  |                                      |
|--|--------------------------------------|
| <b>Study Format</b><br>Distance Learning | <b>Course Type</b><br>Online Lecture |
|--|--------------------------------------|

|   |                  |
|---|------------------|
| <b>Information about the examination</b>  |                  |
| <b>Examination Admission Requirements</b> | <b>BOLK:</b> yes |
| <b>Type of Exam</b>                       | Exam, 90 Minutes |

|                         |                      |                 |                  |                          |                    |
|-------------------------|----------------------|-----------------|------------------|--------------------------|--------------------|
| <b>Student Workload</b> |                      |                 |                  |                          |                    |
| <b>Self Study</b>       | <b>Contact Hours</b> | <b>Tutorial</b> | <b>Self Test</b> | <b>Independent Study</b> | <b>Hours Total</b> |
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|   |   |
|---|---|
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| <input checked="" type="checkbox"/> Course Book   | <input type="checkbox"/> Creative Lab                         |
| <input type="checkbox"/> Vodcast                  | <input type="checkbox"/> Guideline                            |
| <input checked="" type="checkbox"/> Shortcast     | <input checked="" type="checkbox"/> Live Tutorium/Course Feed |
| <input checked="" type="checkbox"/> Audio         | <input type="checkbox"/> Reader                               |
| <input checked="" type="checkbox"/> Exam Template | <input checked="" type="checkbox"/> Slides                    |