Course description
Advanced Topics in Software Architecture

SDU

Advanced Topics in Software Architecture

Academic Study Board of the Faculty of Engineering

Teaching language: English
EKA: T520049102
Censorship: Second examiner: None
Grading: Pass/Fail
Offered in: Odense
Offered in: Autumn
Level: Master

Course ID: T520049101
ECTS value: 5

Date of Approval: 03-04-2023

Duration: 1 semester

Version: Approved - active

Course ID
T520049101

Course Title
Advanced Topics in Software Architecture

ECTS value
5

Internal Course Code
SM1-ATSA

Responsible study board
Academic Study Board of the Faculty of Engineering

Date of Approval
03-04-2023

Course Responsible

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Programme Secretary

Name	Email	Department	City
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Offered in
Odense

Level
Master

Offered in
Autumn

Duration
1 semester

Recommended prerequisites
Bachelor in Software Engineering or similar, e.g.
- Basic understanding of software architecture, e.g. design patterns
- Basic understanding of object-oriented programming languages and concepts
- Basic understanding of software engineering concepts and processes

Learning objectives - Knowledge
The student is able to
- Explain tools and technologies for implementing software architecture
- Explain and discuss software architecture documentation
- Analyze and specify architectural requirements for software architecture
- Explain and argue for software architecture and associated qualities attributes and architectural problems
- Explain methods for agile architecture and architectural evolvement
- Describe advanced software architecture topics to support software architecture processes and modeling

Learning objectives - Skills
The student is able to
- Select and combine tools and technologies to implement software architecture
- Analyze, design, and develop architectural prototypes of software architecture to achieve quality attributes
- Document, describe, and communicate modern software architectures
- Analyze existing software architectures and identify architectural problems

Learning objectives - Competences
The student is able to
- Ability to apply software architectures for different quality attributes using tools and technologies
- Ability to analyze and document software architectures and motivate the usage of adequate software architectures to obtain relevant quality attributes
- Ability to devise and apply software architecture in agile environments

Content
The course introduces advanced software architecture topics. The course covers software architecture topics such as software architecture quality attributes, patterns, views, and evaluation as well as documentation and formal languages to describe software architecture. The course will apply the advanced topics to concrete problems and examples, e.g. by using the introduced tools and techniques to obtain specific quality attributes.

URL for Skemaplan

Odense
Show full time table

Teaching Method
Lectures, seminars, group exercises and supervision.

Number of lessons
48 hours per semester

Teaching language
English

Examination regulations

Exam regulations

Name
Exam regulations

Examination is held
End of semester

Tests

Exam

EKA
T520049102

Name
Exam

Form of examination
Written exam

Censorship
Second examiner: None

Grading
Pass/Fail

Identification
Student Identification Card - Date of birth

Language
Normally, the same as teaching language

ECTS value
5

Additional information
The form of examination in the re-examination is the same as in the ordinary examination.

Courses offered

Period	Offer type	Profile	Programme	Semester

Studieforløb

Profile	Programme	Semester	Period