Course description
Software Architecture

Software Architecture

Academic Study Board of the Faculty of Engineering

Teaching language: English
EKA: T510033102
Censorship: Second examiner: None
Grading: 7-point grading scale
Offered in: Odense
Offered in: Spring
Level: Bachelor

Course ID: T510033101
ECTS value: 5

Date of Approval: 29-06-2023

Duration: 1 semester

Version: Approved - active

Course ID
T510033101

Course Title
Software Architecture

ECTS value
5

Internal Course Code
SE6-SA

Responsible study board
Academic Study Board of the Faculty of Engineering

Date of Approval
29-06-2023

Course Responsible

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Name	Email	Department	City
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Offered in
Odense

Level
Bachelor

Offered in
Spring

Duration
1 semester

Recommended prerequisites
To follow this course it is strongly recommended to have knowledge about operating systems, distribution and web technologies.

Learning objectives - Knowledge
The student will be able to:

•Explain the impact of software architecture to software (systems) development
•Describe methods for specifying and eliciting architectural requirements
•Describe the architecture of software systems associated qualities
•Explain the link between software architecture, quality, and development context
•Describe steps in the selection of appropriate software architecture tactics and patterns
•Explain software architecture design decisions and how to create an architectural strategy
•Describe steps in the evaluation of software architecture

Learning objectives - Skills
The student will be able to:

•Define software requirements for a software architecture
•Select software architecture tactics and patterns given specific requirements
•Transfer a selection of software architecture tactics and patterns into a software design and implementation
•Compare different software architecture tactics and patterns for a specific set of requirements
•Select and perform an appropriate software architecture quality evaluation method
•Document a software architecture in relevant views
•Apply tools to support the software architectural design and software development

Learning objectives - Competences
The student will be able to:

•Ability to apply software architecture methods to address tensions among different software architectural qualities and settle the tensions in a concrete design

Content
The course gives an overview of the area of software architecture. The course covers software architecture topics such as software architecture requirements, tactics and patterns, views and evaluation. The course will also cover how to combine tactics and patterns to meet requirements by an architectural strategy that address tensions among different software architectural qualities.

URL for Skemaplan

Odense
Show full time table

Teaching Method
Lectures, laboratory exercises, and project work.

Number of lessons
48 hours per semester

Teaching language
English

Examination regulations

Exam regulations

Name
Exam regulations

Examination is held
By the end of the semester.

Tests

Exam

EKA
T510033102

Name
Exam

Form of examination
Written exam

Censorship
Second examiner: None

Grading
7-point grading scale

Identification
Student Identification Card - Exam number

Language
English

Duration (hours)
2

ECTS value
5

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

Prerequisites

Type	Prerequisite name	Prerequisite course
Prerequisite not found		

Additional information
The course has been approved by the Academic Study Board as an elective course on the Master of Science in Engineering programme in Software Engineering, provided they do not have a bachelor degree from SDU in Software Engineering.

Uddannelsen har fået godkendt en ændring i reeksamensform for sommereksamen 2023. Ændringen er fra skriftligt eksamen med ingen censur til mundtlig eksamen med intern censur.

Courses offered

Period	Offer type	Profile	Programme	Semester
Spring 2023	Optional	Bachelor i spiludvikling og læringsteknologi, optag 2022	Bachelor of Science in Engineering (Game Development and Learning Technology) | Bachelor of Science in Engineering (Game Development and Learning Technology) | Odense	
Spring 2023	Optional	Bachelor i spiludvikling og læringsteknologi, optag 2021	Bachelor of Science in Engineering (Game Development and Learning Technology) | Bachelor of Science in Engineering (Game Development and Learning Technology) | Odense	
Spring 2023	Optional	Bachelor i spiludvikling og læringsteknologi, optag 2020	Bachelor of Science in Engineering (Game Development and Learning Technology) | Bachelor of Science in Engineering (Game Development and Learning Technology) | Odense	
Spring 2023	Mandatory	Bachelor i Software Engineering, optag 2020	Bachelor of Science in Engineering (Software Engineering) | Odense	6
Spring 2023	Mandatory	Bachelor i Software Engineering, optag 2021	Bachelor of Science in Engineering (Software Engineering) | Odense	6
Spring 2023	Mandatory	Bachelor i Software Engineering, optag 2022	Bachelor of Science in Engineering (Software Engineering) | Odense	6
Spring 2023	Optional	Kandidat i spiludvikling og læringsteknologi, optag 2022	Master of Science in Engineering (Game Development and Learning Technology) | Master of Science in Engineering (Game Development and Learning Technology) | Odense	
Spring 2023	Optional	Kandidat i spiludvikling og læringsteknologi, optag 2021	Master of Science in Engineering (Game Development and Learning Technology) | Master of Science in Engineering (Game Development and Learning Technology) | Odense	
Spring 2023	Exchange students			

Studieforløb

Profile	Programme	Semester	Period
Bachelor i Software Engineering, optag 2020	Bachelor of Science in Engineering (Software Engineering) | Odense	6	F22, E22, F23
Bachelor i Software Engineering, optag 2021	Bachelor of Science in Engineering (Software Engineering) | Odense	6	F22, E22, F23, E23

Profile	Programme	Semester	Period
Bachelor i Software Engineering, optag 2022	Bachelor of Science in Engineering (Software Engineering) | Odense	6	E22, F23
Bachelor i Software Engineering, optag 2022	Bachelor of Science in Engineering (Software Engineering) | Odense	6	E23
Bachelor i Software Engineering, optag 2023	Bachelor of Science in Engineering (Software Engineering) | Odense	6	E23