Course description
Software Engineering of Mobile Systems

SDU

Software Engineering of Mobile Systems

Academic Study Board of the Faculty of Engineering

Teaching language: English
EKA: T520006102, T520006112
Censorship: Second examiner: Internal, Second examiner: None
Grading: 7-point grading scale, Pass/Fail
Offered in: Odense
Offered in: Autumn
Level: Master

Course ID: T520006101
ECTS value: 10

Date of Approval: 31-08-2018

Duration: 1 semester

Version: Archive

Course ID
T520006101

Course Title
Software Engineering of Mobile Systems

ECTS value
10

Internal Course Code
SM1-SEM

Responsible study board
Academic Study Board of the Faculty of Engineering

Date of Approval
31-08-2018

Course Responsible

Name	Email	Department
Kristian Severin Rasmussen	krsr@tek.sdu.dk	Uddannelsesadministration, Den Tekniske Fakultetsadministration
Mikkel Baun Kjærgaard	mbkj@mmmi.sdu.dk	Mærsk Mc-Kinney Møller Instituttet, SDU Software Engineering
Sofie Birch	sbirch@tek.sdu.dk	Uddannelsesadministration, Den Tekniske Fakultetsadministration

Teachers

Name	Email	Department	City
Mikkel Baun Kjærgaard	mbkj@mmmi.sdu.dk	Mærsk Mc-Kinney Møller Instituttet, SDU Software Engineering	

Programme Secretary

Name	Email	Department	City
Anna Schollain	avs@tek.sdu.dk	TEK Studieadministration, Den Tekniske Fakultetsadministration	

Offered in
Odense

Level
Master

Offered in
Autumn

Duration
1 semester

Mandatory prerequisites
Bachelor in software engineering or equivalent.

Overall learning objectives
Provides the student with a complete collection of techniques for incremental and iterative development of software projects with mobile system components.

Learning objectives - Knowledge
The student is able to:
- Explain how to work systematically with development of mobile systems considering possibilities and limitations of the project and devices
- Explain what mobile sensing is and relevant application areas

Learning objectives - Skills
The student is able to:
- Analyze architectural structures and qualities of a mobile system and provide arguments for what needs to be done to evolve the architecture according to new and changing requirements
- Explain the code base in a larger mobile system and explain how incremental expansions of functionality can be made according to changing requirements
- Provide arguments for the choice of technologies in a given mobile system project taking into account the architectural and project requirements
- Provide arguments for how to architect mobile system solutions that address energy efficiency and resource availability challenges.

Learning objectives - Competences
The student is able to:
- Should be able to reflect on the fundamental challenges of mobile systems and existing methods for engineering mobile systems.

Content
Advanced topics in software architecture for development of mobile systems. Mobile sensing systems and applications. Methods for addressing energy efficiency and resource adaptability challenges in mobile systems. Methods for incremental and iterative development of mobile systems. Performance testing of mobile systems.

URL for Skemaplan

Odense
Show full time table

Teaching Method
The course has its focus on one single software engineering project. Forms of instruction include lectures, seminars, exercises and supervision.

Number of lessons
60 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
T520006102

Name
Exam

Description
The examination is based on an overall assessment of:

- Project report
- Oral examination

Form of examination
Combined test

Censorship
Second examiner: Internal

Grading
7-point grading scale

Language
English

ECTS value
10

Prerequisites

Type	Prerequisite name	Prerequisite course
Exam	T520006112, Examination conditions	T520006101, Software Engineering of Mobile Systems

Exam regulations

Name
Exam regulations

Examination is held
By the end of the semester

Tests

Examination conditions

EKA
T520006112

Name
Examination conditions

Description
Completion of the mandatory activities in the module is a prerequisite for the exam. Criteria of fulfilment will be determined before the module starts and described in the module plan.

Form of examination
Compulsory assignment

Censorship
Second examiner: None

Grading
Pass/Fail

Language
English

ECTS value
0

Courses offered

Period	Offer type	Profile	Programme	Semester
Fall 2019	Mandatory	Software Engineering	Master of Science in Engineering (Software Engineering) | Odense	1

▾ Studieforløb

Profile	Programme	Semester	Period