



DEP OF APPLIED INFORMATION TECHNOLOGY

TIA110 Mobile Computing - Design and Implementation, 7.5 higher education credits

Mobile Computing - Design and Implementation, 7,5 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by The IT Faculty Board on 2010-12-21 and was last revised on 2016-02-23 by Department of Applied Information Technology to be valid from 2016-09-01, autumn semester of 2016.

Field of education: Science 100%

Department: Dep of Applied Information Technology

Position in the educational system

The course is offered as a single subject course.

The course can be part of the following programmes: 1) Computer Science, Master's Programme (N2COS) and 2) Computer Science, Bachelor's Programme (N1COS)

Main field of studies

Interaction Design

Computer Science-Interaction Design

Specialization

A1N, Second cycle, has only first-cycle course/s as entry requirements

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Entry requirements

To be eligible for the course the student must have a Bachelor degree of 180 credits. Special requirements are DIT011 Object-oriented Software Development 7.5 credits and at least one of the courses TIG095 Human Computer Interaction 7.5 credits or TIG091 Design and construction of graphical interfaces 7.5 credits or the equivalent.

To be eligible for this course as a programme student in Science Bachelors Programme N1COS, the student must have passed at least 90 credits in programme courses

including one of the courses TIG095 Human Computer Interaction 7.5 credits or TIG091 Design and construction of graphical interfaces 7.5 credits, or the equivalent.

Learning outcomes

After completion of the course the student should be able to:

Knowledge and understanding

- describe how mobile applications differ from traditional desktop applications, both in terms of challenges and possibilities,
- exemplify important trends in the use of mobile computing,
- list important guidelines for design on small screens,
- list relevant frameworks simplifying implementation.

Skills and abilities

- use important guidelines for design on small screens,
- use relevant frameworks simplifying implementation,
- design the entire user experience for a mobile platform including both the interface and the interaction use and modify standard components for user interface design,
- select an appropriate architecture and a set of frameworks to implement an application,
- work with state-of-the-art tools for development and user interface design.

Judgement and approach

- analyse existing mobile applications with focus on presentation and interaction,
- choose and motivate design strategies in relation to the goals mentioned above,
- choose and motivate appropriate implementation methods and frameworks for a given design.

Course content

The course deals with design and implementation for mobile computing. The focus is on smart phones using touch screens for input. Both design principles, various application areas for mobile computing and an example framework for development using state-of-the-art tools and methods will be covered.

Form of teaching

The course consists of lectures, exercises made in groups, and a final project carried out in groups where the aim is to invent, design and implement a mobile computing application making use of the interaction possibilities available on a modern mobile

computing device.

Language of instruction: English

Assessment

The course is examined through two modules:

1. Exercises and a group project, 4 credits and
2. Individual written home exam, 3.5 credits.

The group project is examined by a written report and a demonstration of the project and the exercises are examined with written assignments. If the project fails, the student gets one chance to improve it to get the grade Pass.

In case a student misses the home exam, the student will have to retake a new home exam.

A student who has failed a test twice has the right to change examiners, if it is possible. A written application should be sent to the Department.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

To receive the grade Pass all parts of the course must be completed with a passing grade.

To receive the grade Pass with distinction, Pass with distinction is required on the home exam and at least the grade Pass is required on the exercises and the project.

Course evaluation

After completion of the course the students are to be given the possibility of participating in course anonymously. Continuous evaluation will be used, including three meetings between teacher(s) and student representatives. Additionally, the course will be evaluated with a course questionnaire, and discussed with the student representatives.

Additional information