Linnæus University

Course syllabus

Faculty of Technology
Department of Informatics

4IK506 Digitala Omgivningar: Informationssamhället och Sakernas Internet, 15 högskolepoäng

Digital Environments: Information Society and Internet of Things, 15 credits

Main field of study
Informatics

Subject Group
Informatics/Computer and Systems Sciences

Level of classification
Second Level

Progression
A1N

Date of Ratification
Approved by Faculty of Technology 2015-04-28
The course syllabus is valid from spring semester 2016

Prerequisites
General entry requirements for second cycle studies and specific entry requirements:

- English B/6 or the equivalent.

Objectives

Knowledge and understanding
after completing the course students will be able to:

- describe, analyze and reflect on how information technology in general and, more specifically, the Internet of Things affect people's lives on a societal, organizational and individual level
- describe, analyze and reflect on user participation in the design of interactive products and have knowledge of theories and methods for participatory design

Skills and abilities
after completing the course students will be able to:

- identify and analyze a range of applications with a focus on interactive products and services. And how they facilitate and support people's interactions with other people, its surroundings and interactive products
- use and adapt methods and techniques for the design of interactive products or services with and for users
- work in groups in the design process

Judgement and approach
after completing the course students will be able to:

- describe, analyze and reflect on how the Internet of Things can create value and help in organizing and participating in the creation of an information society for all
- describe, analyze and reflect on user participation and how it will help to facilitate and support people with experiences and activities and their involvement with and through interactive products or services in the creation of digital environments

Content
The course focus is on the impact of information technology and its impact on society, organization and individual level. Organization, participation and interaction as well as the vision of an information society for everyone will be focused through the theories and methods of user-oriented IT design. It also aims to give the overall understanding of the relationship between social change, organizational change and design as well as the use of digital services.

The course includes modules that deal with:

- Information technology and society
- Internet of Things and design of interactive products and services

Module 1 Information technology and society
This module provides an introduction to information technology - including the Internet of Things, the impact and its consequences on the social, organizational and individual level. Organization, participation and interaction, and how a vision of an information society can be achieved in an increasingly digitized world; i.e., the things we surround ourselves with which contains digital electronic components that can communicate with each other.

Module 2 Internet of Things and design of interactive products and services
Internet of Things is a collective term for the development which means that many of the things we surround ourselves with contains digital electronic components that can communicate with each other. The digital components also tend to be smaller and to integrate into our surroundings both in everyday and working life.

In this part to introduce the concepts and methods learned in the design of interactive products and services based on user-oriented design. Students receive both theoretical and practical knowledge about the design and how the individual experiences and activities interact with, through and with the help of interactive products and services in the creation of digital environments. Furthermore, the course emphasizes that design is an integral part in the organization of society and daily life of participation.

In a project the students will design interactive products or services for user situation with theories and methods from participatory design.

Type of Instruction
Instruction consists of lectures, seminars and project work. In the project work, the students has to account for their individual contribution.

Examination
The course is assessed with the grades A, B, C, D, E, Fx or F.
The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Assessment of student performance is made through:

1) a written report from the project work that presents, analyzes and reflects on information technology and the Internet of Things impacts and consequences as well as the design process and product user participation
2) an individual written reflection, including the reflection of the work in groups - (part of the report for 1)
3) an oral examination of theory and practice - literature and project

The different assessment methods are weighted as follows
1) 50% (written report) 2) 10% (written reflection on the process and cooperation included in the project report) and 3) 40% (oral examination)

For obtaining at least e as a final grade the student must receive at least E on each module.

Course Evaluation

During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material

Required reading
Informatics Compendium and digital material, Linnaeus University, 500 pages