

**SYLLABUS**

# **Intelligent software systems and HCI 7.5 credits D7023E**

**Intelligenta datorsystem och människa maskin interface**

**Course syllabus admitted: Spring 2012 Sp 3 - Spring 2012 Sp 4**

**DECISION DATE  
2011-12-20**

# Intelligent software systems and HCI 7.5 credits D7023E

## Intelligenta datorsystem och människa maskin interface

### Second cycle, D7023E

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Medieteknik	Computer Technology

## Entry requirements

Courses of at least 90 credits at first cycle including the following knowledge/courses. Students must have knowledge of Computer Science fundamentals including discrete mathematics for engineers, object oriented programming and data structures and algorithms (M0009M, D0010E, D0012E).

## Selection

The selection is based on 30-285 credits

## Examiner

Pawel Pietrzak

## Course Aim

The course gives the student fundamental theories about artificial intelligence and problem solving and ability to develop design principles for interfaces and applications on mobile devices.

## Contents

The course covers:

- Artificial intelligence introduction and problem solving methods
- Knowledge acquisition and representation
- Planning methods
- Probabilistic reasoning, Bayesian networks, Machine learning
- Understanding the mobile use situation
- General mobile design principles and Mobile user Interface design patterns
- Application Technologies and Components of a mobile application

## Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

The education consists of lectures, programming and theoretical assignments. The assignments can require written or verbally presentations and may contain a deadline. During the course home-exams may occur.

## Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Written exam, presentations of programming and theoretical assignments.

## Literature. Valid from Autumn 2009 Sp 1

Recommended textbooks:

Ballard, B (2007) Designing the mobile user experience, John Wiley & Sons, Ltd

Russell and Norvig: Artificial Intelligence -- A Modern Approach, Prentice Hall, second edition.

## Course offered by

Department of Computer Science, Electrical and Space Engineering

## Items/credits

Number	Type	Credits	Grade
0001	Written exam	3	G U 3 4 5
0002	Laboratory work	3	U G#
0003	Seminar	1.5	U G#

## Study guidance

<http://www.ltu.se/csee/utbildning/kurser/GU?l=en>

## Last revised

by Jonny Johansson, huvudansvarig utbildningsledare, SRT 2011-12-20

## Syllabus established

by the Department of Computer Science and Electrical Engineering 2008-12-15