This course syllabus is discontinued or replaced by a new course syllabus.



Course Syllabus

School of Science and Technology

Computer Science, Agent-based Simulation, Advanced Course, 7.5 Credits

Course Code: Main Field of Study:

DT3022 Computer Technology

Education Cycle: Established: Valid from:

First Cycle 2008-11-05

Subject Area: Credits: Subject Group (SCB): Computer Science Progression: Last Approved: Spring semester 2013 Approved by:

Field of Technology 7.5 G2F 2012-09-28 Head of School

Aims and Objectives

General aims for first cycle education

First-cycle courses and study programmes shall develop:

- the ability of students to make independent and critical assessments
- the ability of students to identify, formulate and solve problems autonomously, and
- the preparedness of students to deal with changes in working life.

In addition to knowledge and skills in their field of study, students shall develop the ability to: - gather and interpret information at a scholarly level

- stay abreast of the development of knowledge, and

- communicate their knowledge to others, including those who lack specialist knowledge in the field.

(Higher Education Act, Chapter 1, Section 8)

Course Objectives

Missing.

Main Content of the Course

Missing.

Teaching Methods

Lectures and computer exercises.

Students who have been admitted to and registered on a course have the right to receive tuition and/or supervision for the duration of the time period specified for the particular course to which they were accepted (see, the university's admission regulations (in Swedish)). After that, the right to receive tuition and/or supervision expires.

Examination Methods

Theory, 4 Credits. (Code: 0100) Examination by written test

Laboratory Exercises, 3.5 Credits. (Code: 0200)

Examination by written and oral reporting of exercises.

For further information, see the university's local examination regulations (in Swedish).

Grades

According to the Higher Education Ordinance, Chapter 6, Section 18, a grade is to be awarded on the completion of a course, unless otherwise prescribed by the university. The university may prescribe which grading system shall apply. The grade is to be determined by a teacher specifically appointed by the university (an examiner).

According to regulations on grading systems for first- and second-cycle education (vice-chancellor's decision 2010-10-19, reg. no. CF 12-540/2010), one of the following grades is to be used: fail, pass, or pass with distinction. The vice-chancellor or a person appointed by the vice-chancellor may decide on exceptions from this provision for a specific course, if there are special reasons.

Grades used on course are Fail (U), Pass (G) or Pass with Distinction (VG).

Theory Grades used are Fail (U), Pass (G) or Pass with Distinction (VG).

Laboratory Exercises Grades used are Fail (U) or Pass (G).

For further information, see the university's local examination regulations (in Swedish).

Specific entry requirements

Computer Science, Object-Oriented Programming, Intermediate Course 7,5 credits, Computer Science, Artificial Intelligence, Intermediate Course 7,5 credits and Computer Science, Methods for Modelling, Simulation and Visualisation, Intermediate Course, 7,5 credits.

For further information, see the university's admission regulations (in Swedish).

Transfer of Credits for Previous Studies

Students who have previously completed higher education or other activities are, in accordance with the Higher Education Ordinance, entitled to have these credited towards the current programme, providing that the previous studies or activities meet certain criteria.

For further information, see the university's local credit transfer regulations (in Swedish).

Other Provisions

missing

Reading List and Other Teaching Materials

Required Reading

F. Klügl (2009) Agent-based Simulation Engineering University of Würzburg, 251 pages, Available for download via "http://www.oru.se/PageFiles/15636/mas_pdfs/kluegl_habilitation.pdf"

S. Railsback and V. Grimm 2011, pp. 95-224 Agent-Based and Individual-Based Modeling Princeton University Press, Part II

Additional Reading

F. Klügl (2001) *Multiagentsimulation - Concepts, Tools, Applications* Addison Wesley (in German), 240 pages

F. Klügl 2009. Chapter 16, p. 477-508 SeSAm: Visual Programming and Participatory Simulation for Agent-Based Models In. D. Weyns and A. Uhrmacher (eds) Agents, Simulations and Applications, Taylor and Francis J. Epstein (2006) *Generative Social Science* Chapter 1, pp. 4-46

M. Wooldridge 2009, 2nd Edition Introduction to Multiagent Systems J. Wiley, 461 pages