



## Course syllabus

Faculty Board of Science and Engineering

School of Computer Science, Physics and Mathematics

2IK003 Generell systemteori, 7,5 högskolepoäng

2IK003 Systems Theory, 7.5 credits

### **Main field of study**

Informatics

### **Subject Group**

Informatics/Computer and Systems Sciences

### **Level of classification**

First Level

### **Progression**

G2F

### **Date of Ratification**

Approved 2009-09-08

Revised 2010-08-04 by School of Computer Science, Physics and Mathematics.

Revision of prerequisites, literature list and course evaluation.

The course syllabus is valid from spring semester 2011

### **Prerequisites**

At least 45 credits in Informatics/Information Logistics or equivalent.

## Objectives

Upon completion of the course, the student should be able to:

- use a generally systems theoretical viewpoint when analyzing a organization and design of information systems
- apply soft systems methodology when analyzing organizations and their information systems
- describe and explain various schools of systems concepts and how to make a comparative analysis on these schools
- understand and analyze the consequences of using different systems approaches
- have knowledge about systems theory, it's development and history.

## Content

The course gives an overview of the area information systems, analysis and systems theory. The course comprises:

- analysis of human activity systems with various sets of schools of systems theories
- practical analysis of information systems
- applying soft systems methodology (SSM) for solving problems and for pursue change processes in organizations
- analysis of systems development methods with general system concepts.

## Type of Instruction

The course consists of lectures, seminars and tutoring.

## Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

Written and/or oral examinations and/or mandatory work. The types of assessment used in the course will be decided on at the beginning of the course. Students who do not pass the regular examination are given the opportunity to do a re-examination shortly after the regular exam.

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

## Course Evaluation

A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

## Required Reading and Additional Study Material

### Required reading

Checkland, P. & Holwell, S. *Information, systems and information systems: making sense of the field*, Wiley Cop., 1998. Pages 262.

Checkland, P. & Poulter, J., *Learning for action: a short definitive account of soft systems methodology and its use for practitioners, teachers and students*, Wiley Cop., 2006. Pages 200.

Skyttner, L., *General systems theory: problems, perspectives, practice*, World Scientific Cop., 2005. Pages 524.

DFM, *Compendium*, Linnæus Universitet, current year. Pages 100.

### Recommended supplementary reading

Weinberg, G.M., *An introduction to general systems thinking*, Dorset House Cop., 2001.

Checkland, P., *Systems thinking, systems practice: includes a 30-year retrospective*, John Wiley, 1999.