



## Systems Analysis and Design

### Systemanalys och design

7.5 credits

7.5 högskolepoäng

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**Ladok Code:** NSA011

**Version:** 5.0

**Established by:** The Teaching Committee 2012-05-08

**Valid from:** Autumn 2012

**Education Cycle:** First cycle

**Main Field of Study (Progressive Specialisation):** Informatics (G1N)

**Disciplinary Domain:** Natural sciences

**Prerequisites:**

**Subject Area:** Informatics/Computer and Systems Sciences

**Grading Scale:** Fail (U), Pass (G) or Pass with Distinction (VG)

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### Content

- Foundations of system development
- System Development Processes
- Management of system development projects
- Structured analysis
- Structured design of data
- Object-Oriented Analysis and Design
- Design of user interfaces
- Implementation and Maintenance

The course starts with lectures on the principles, methods and techniques of systems development. This is followed by lectures on the steps and phases in systems development in which students in parallel with the lectures is implementing a project. The project work is documented and presented at a seminar where another group opposes on the work.

### Learning Outcomes

The course's overall objective is that the students should acquire an overview of principles, methods and techniques of systems development.

#### *Knowledge and understanding*

After completing the course the student is expected to be able to:

- explain the principles, methods and techniques of systems development
- elaborate on the application areas for different types of methods
- explain the problem of system development
- describe the differences between standard and self-development
- describe the various stages of a phased systems analysis method
- explain, from a systemtheoretical view, the effect of the perception of system development
- discuss principles, methods and techniques of systems with persons without specialized knowledge in this area

#### *Skills and abilities*

- use a phased system development methodology to implement a system development project
- collaborate with other students to jointly implement a system development project
- analyze and model businesses and organisations

- identify and describe different types of objectives for businesses and organisations
- analyze and describe processes
- describe a final, new system in terms of process and data structures

#### *Values and perspectives*

- show an understanding of how the values a system development methodology is based on can affect the resulting system
- demonstrate an understanding of the uncertainties which different users may have when it comes to introducing a new information system in a business
- critically reflect on their own system development project

### **Forms of Teaching**

Lectures, seminars, tutorials and group work in project form. The course is taught in Swedish, except for international students, where it is taught in English. The literature is in English.

### **Forms of Examination**

Examination of the course consists of the following mandatory elements:

- A group work in the form of a system development project
- Documentation of group work in the form of a written report,
- Written reflection on group work
- Presentation and defense of the group work, with oral and written opposition at a final seminar
- Individual examination through written exam

The student receives the grade Pass on the whole course if both project and the written exam are passed.

The student receives the grade Pass with distinction on the whole course if the project is passed and the written exam have been graded Pass with distinction.

The students' rights and obligations at the examination is in accordance with guidelines and regulations at the University College of Borås.

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### **Literature and Other Teaching Materials**

Hoffer, Jeffrey A., George, Joey & Valacich, Joseph (2011) *Modern Systems Analysis and Design*

ISBN: 9780135094891

Lecture Notes and compendia.

### **Student Influence and Evaluation**

The compilation is made public in accordance with the Schools regulations and will be the foundation for future course planning and is part of the program evaluation that is carried out.

### **Miscellaneous**

The course is given to the programmess Business Informatics with specialisation in International Marketing and IT, Systems Science, Business Informatics and Computer and Systems Science as well as in the master programmes in informatics.

The course will also be provided as a stand-alone course.