

Department of Informatics

## EIN002F, Design Science Research in Information Systems (7.5 credits)

*Third Cycle/Forskarutbildningsnivå*

### Details of approval

The syllabus was approved by The Board of the Department of Informatics on 2021-05-26. The syllabus applies from spring semester 2022.

### General information

The course EIN002F is a course in Informatics at the third-cycle level.

*Language of instruction:* English

*Main field of studies:* Informatics

### Learning outcomes

#### **Knowledge and understanding**

For a pass on the course, the PhD student shall demonstrate knowledge and understanding of

- the characteristics of design science research in Information Systems (IS)
- design processes, methods and techniques
- planning a design research inquiry in IS

#### **Competence and skills**

For a pass on the course, the PhD student shall demonstrate competence and skills in

- conceptualizing and formulating IS design problems
- using and applying design methods and techniques to solve IS design problems
- in developing design science research solutions and artifacts

## Judgement and approach

For a pass on the course, the PhD student shall demonstrate the ability to independently and critically assess

- the use and application of design research methods and techniques
- design research problems, solutions, and artifacts
- the design research process

## Course background

The course focuses on the application and use of design science research in information systems. It provides knowledge on the fundamentals of methods and techniques classified as ‘design’ including artifact design, development, and evaluation. It also includes a discussion of the concepts of design, the IS artifact, design problems and solutions in addition to theories of design. The course is supplemented by a discussion of a specific form of design science research called Action Design Research (ADR).

## Course design

The course is designed to include extensive discussions of literature on design science research as well as hands-on exercises about the following themes:

- Theories of design
- The design science research process, methods, and techniques
- The design of IS artifacts and products of design science research
- Action Design Research (ADR)

## Course content

The course will be structured around main themes in the literature. These include the following:

- The characteristics of design science research in IS
- Theories of design and design as a science
- The design science research process
- Design science research methods and techniques
- The IS artifact and design science research products and outcomes
- Design science problems and solutions
- Action design research (ADR)

## Assessment

Assessment will be done along several dimensions corresponding to the deliverables and learning outcomes of the course. This includes the following:

- Active participation in the discussions and presentations of the four course themes including the ADR exercises. (*1 credit*)
- Writing individual summaries of the reading literature in each theme – *see separate instructions by the course leaders. (2 credits)*

- Writing a group report outlining the outcome from ADR exercises – *see separate instructions by the guest lecturer. (1.5 credits)*
- Writing an individual publishable article on one of themes of the course – *see separate instructions by the course leaders. (3 credits)*

## Credits

Grades are Pass or Fail.

## Entry requirements

PhD students accepted to the PhD programme in Informatics or an adjacent subject are eligible for the course.

## Academic integrity

The University views plagiarism very seriously, and will take disciplinary actions against students for any kind of attempted malpractice in examinations and assessments. The penalty that may be imposed for this, and other unfair practice in examinations or assessments, includes suspension from the University.

## Course literature

See separate literature list.