

## COURSE SYLLABUS – THIRD-CYCLE EDUCATION

### **Theory of science and research methodology, 5 higher education credits**

*Vetenskapsteori och forskningsmetodik, 5 högskolepoäng*

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<b>Education cycle:</b>	Third-cycle education
<b>Disciplinary domain:</b>	Industrial Product Realisation
<b>Subject area:</b>	-
<b>Syllabus valid from:</b>	Course syllabus reviewed by RUF 2013-04-29, established 2013-06-10 by the dean (vd-beslut 2013/053), revised 140523 based on ASP 140311

#### **Learning outcome**

On completion of the course the student should:

##### *Knowledge and understanding*

- demonstrate basic understanding of various scientific traditions relevant to the field industrial product realisation
- demonstrate deeper knowledge of scientific methods in general and of methods in the specific field of research in particular

##### *Skills and abilities*

- demonstrate an ability to identify and formulate issues and to plan with appropriate methods a limited research task

##### *Judgement and approach*

- demonstrate an ability to make ethical assessments in their own research
- demonstrate insight into the possibilities and limitations of science

#### **Content**

The course includes:

- Basics within theory of science
- Different research designs
- Case study, design science/design research, experiment, action/interactive research, modelling/simulation, etc. based on the needs in the group
- Techniques for data collection (of empirical material)
- Quality and ethics in research

### **Type of instruction**

Lecture and seminars.

Teaching is conducted in English or Swedish dependent on the requirements.

### **Prerequisites**

Admitted to third cycle programme or equivalent.

### **Examination and grades**

The course is graded Fail or Pass.

Examination includes oral and written parts within two assignments, of which one is individual and one is a group assignment.

<b>Name of the test</b>	<b>Value</b>	<b>Grading</b>
Assignments	5 hec	U/G

### **Course literature**

Williamson, K. (2002) *Research methods for students and professionals*, 2nd ed., Centre for Information Studies, Wagga wagga, NSW.

Additional material is handed out.