

COURSE SYLLABUS

Theory of Science and Research Methodology, 5 credits

Vetenskapsteori och forskningsmetodik, 5 högskolepoäng

Course Code: FT3VOFT	Education Cycle: Third-cycle level
Confirmed: May 21, 2025	
Valid From: Sep 01, 2025	

Intended Learning Outcomes (ILO)

After a successful course, the student shall:

Knowledge and understanding

- demonstrate basic understanding of various scientific traditions relevant to the field industrial product realisation, and
- 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 insight into quality in research, and
- 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), and
- Quality in research.

Type of instruction

Lectures and seminars.

Language of instruction is in English.

Entry requirements

Admitted to third-cycle programme or equivalent.

Examination and grades

The course is graded Pass (G) or Fail (U).

Registration of examination:

Name of the Test	Value	Grading
Assignments	5 credits	G/U

Course literature

Please note that changes may be made to the reading list up until eight weeks before the start of the course.

Säfsten, K. Gustavsson, M. (2020). Research Methodology for Engineers and Other Problem Solvers. Lund: Studentlitteratur

Additional material is handed out.