

COURSE SYLLABUS

Preliminary, not confirmed

Engineering and Research Ethics, 5 credits

Ingenjör- och forskningsetik, 5 högskolepoäng

Course Code: FT3IOFA

Education Cycle: Third-cycle level

Confirmed:

Valid From: Jan 13, 2025

Intended Learning Outcomes (ILO)

After a successful course, the student shall:

Knowledge and understanding

- demonstrate knowledge and understanding of laws and regulations governing research ethics in general and engineering sciences in specific, and
- demonstrate knowledge and understanding on good research practice, as agreed on European, national (Sweden), and institutional (Jönköping University) level.

Skills and abilities

- demonstrate ability to identify ethical challenges for researchers involved in development and implementation of new technologies in society,
- describe and analyze the ethical challenges affecting one's own research field and research practice, and
- apply laws, regulations and guidelines governing research involving general data management and data management involving humans and personal data.

Judgement and approach

- demonstrate the ability to make assessments of ethical aspects of his or her own research, and
- demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used.

Content

The course covers the major themes and concepts in research and engineering ethics, such as the professional responsibilities of engineers, dual-use problems, whistleblowing, scientific misconduct, authorship and credit in research, informed consent, conflicts of interest, and the engineer's responsibility for sustainable development. Professional engineering codes of ethics and major research ethical declarations will be introduced.

- Critical discussion of laws and regulations that regulate research and engineering ethics,
- Fraud and misconduct in science,
- The ethics and value of technology and scientific progress,
- Ethical aspects of research collaborations,
- Intellectual ownership
- Authorship and scientific writing issues, and
- The scientist in society.

Type of instruction

Lectures and compulsory seminars with presentation and defence assignments.

Language of instruction is in English.

Entry requirements

Admitted to a third-cycle programme or equivalent.

Examination and grades

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

The grade Pass requires active participation in seminars and the completion of written assignments assignment.

Registration of examination:

Name of the Test	Value	Grading
Assignments	3 credits	G/U
Seminars ¹	2 credits	G/U

¹ Attendance in seminars is mandatory.

Course literature

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

The literature list for the course will be provided two months before the course starts. The most recent editions of course literature should be used to ensure current descriptions of laws and regulations.