Technology and Ethics

Programme course

6 credits

Teknik och etik

TGTU01

Valid from: 2017 Spring semester

Determined by
Board of Studies for Computer Science
and Media Technology

Date determined
2017-01-25

Main field of study
No Main Field of Study

Course level
First cycle

Advancement level
G1X

Course offered for
- Civil Engineering, B Sc in Engineering
- Computer Engineering, B Sc in Engineering
- Civic Logistics
- Communication and Transportation Engineering, M Sc in Engineering
- Media Technology and Engineering, M Sc in Engineering
- Chemistry
- Computer Science and Engineering, M Sc in Engineering
- Industrial Engineering and Management - International, M Sc in Engineering
- Industrial Engineering and Management, M Sc in Engineering
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- Mechanical Engineering, M Sc in Engineering
- Applied Physics and Electrical Engineering, M Sc in Engineering
- Protein Science, Master's programme
- Information Technology, M Sc in Engineering
- Applied Physics and Electrical Engineering - International, M Sc in Engineering
- Computer Science and Software Engineering, M Sc in Engineering
- Chemical Analysis Engineering, B Sc in Engineering
- Chemical Biology
- Engineering Biology, M Sc in Engineering
- Electronics Design Engineering, M Sc in Engineering

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites
Requisite general qualifications for university.

Intended learning outcomes

The central aim of the course is for the student to enhance his/her ability for ethical reflection aided by the different analytical tools of philosophical ethics with special focus on ethical challenges concerning technology and engineering. After completing the course the student shall be able to:

- Describe and explain central theories, principles and concepts within normative ethics.
- Describe and explain ethical challenges connected to the engineering profession and to technological development and application.
- Orally discuss, analyze and evaluate different ethical viewpoints.
- Apply ethical theories, principles and concepts to particular cases and situations.
- Take a stance on ethical issues in a constructive and argument based way.
- In cooperation with others in writing investigate, analyze and problematize an ethical issue in the form of a short paper.

Course content

Lectures and seminars cover both general ethical theory and specific areas of technology and engineering ethics. Selection of cases for discussion and analyzis varies with the literature for the course. Areas that are covered:
Working with ethical problems: methodological issues, analytical tools and basic concepts.
Central theories, principles and concepts within normative ethics: responsibility, justice, rights, consequentialism, deontology, human dignity Technology and ethics: technological development and moral responsibility, technology assessment, surveillance and privacy, risk
Professional ethics and engineering ethics: particular cases and problems, professional codes of ethics. The course shall in general provide the participant with opportunities for reflection on his/her future professional role as an engineer and on what ethical responsibilities that may bring.

Teaching and working methods

The scheduled parts of the course consists in lectures, seminars, instruction for paper writing and a paper seminar.

Examination

UPG3	Written assignment. Seminar	1.5 credits	U, G
TEN2	Written examination	4.5 credits	U, 3, 4, 5

Attendance to at least 75% of the lectures is required.

Grades

Alternative-grade scale, LiU, U, 3, 4, 5

Department
Institutionen för Tema

Director of Studies or equivalent
Maria Eidenskog

Examiner
Anders Nordgren

Course website and other links

Education components
Preliminary scheduled hours: 30 h
Recommended self-study hours: 130 h

Course literature

Additional literature

Compendia

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.