UNIVERSITY OF SKÖVDE

COURSE SYLLABUS

Inclusive Technology Development and Design, Third-cycle level

5 credits

Course code: IT0942F
Version number: 1.0
Valid from: 2021-01-01
Ratified by: Education Commitee for Third-cycle Studies in Informatics
Date of approval: 2020-10-26

1. General about the course

The course is provided by the University of Skövde and is named Inclusive Technology Development and Design (Inkluderande teknikutveckling och design). It comprises 5 credits. The course is at third cycle.

The course is a part of the third-cycle subject area of Informatics.

2. Entry requirements

In order to fulfil the specific entry requirements, the applicant must have completed academic courses of at least 60 credits, including independent thesis writing of at least 15 credits at advanced level, within the field Informatics, applicable areas of a similar kind or other fields which are directly judged as relevant for the Licentiate or PhD thesis.

A further requirement is proof of skills in English equivalent of studies at upper secondary level in Sweden, known as English course B. This is normally demonstrated by means of an internationally recognized test, e.g. IELTS, TOEFL, or the equivalent.

3. Course content

The doctoral student will explore the relationship between technology development and design, information systems, and society in the context of intersectional and inclusive research perspectives. The doctoral student will explore the ways in which technology is co-constructed within complex social systems and investigate how this may influence the design and implementation of new technologies and related discourses around them. The doctoral students will draw on contemporary and historical perspectives to develop their analytical skills and deepen their awareness of inclusive development, intersectionality, and design practices in socio-cultural contexts. Particular focus will be on the ways bias and prejudice impact technological decision-making and may reinforce destructive and exclusionary power structures and forms of systemic oppression.

4. Objectives

After completed course the doctoral student should be able to:

- know and apply a variety of theories representative for inclusive and intersectional research practices (including gender, sexuality, race, ability, class, and nationality, for example);
- explain and document a variety of intersectional perspectives to support diverse and inclusive research design and development of technological tools and systems;
- understand and apply the terminology of interdisciplinary theoretical critique along with intersectional research practices to their own and to others design and development practices;
- construct a representative theoretical critique in the context of their own study discipline, which could in principle be developed and/or tested so that it could be published and
- identify both inclusive and biased perspectives within socio-cultural contexts that influence

technological design and information systems.

5. Examination

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

To receive the grade Pass on the course, all examination parts have to be graded Pass.

The course has the following examination parts:

- **Seminars**
  2 credits, grades: G/U
- **Final assignment**
  3 credits, grades: G/U

Doctoral students with a permanent disability who have been approved for directed educational support may be offered adapted or alternative examinations.

6. Forms of teaching and language of tuition

The teaching comprises lectures and seminars from a range of disciplines, including from the fields of Engineering, Computer Science, Cognitive Science, User-Experience, Games, and Digital Media and Culture. Lectures concentrate on delivery of theoretical and critical perspectives, whereas seminars focus on analysis of the theories through group discussion, article presentation, and reflections on practices relevant to the fields.

The teaching is conducted in English.

7. Course literature and other educational materials

A list of current course literature is provided by the course coordinator before each time the course is provided.

Examples of course literature:

Burgstahler, S. (1994). Increasing the representation of people with disabilities in science, engineering, and mathematics. *Information, Technology and Disability,* 1(4). Retrieved from http://www. washington.edu/ doit/Press/representation.html

Erlandson, R., Enderle, J., & Winters, J. (2006). Educating engineers in universal and accessible design. In J. M. Winters & M. F. Story (Eds.), *Medical instrumentation: Accessibility & usability considerations*. CRC Press

Grint, K, Gill, R and Gill RM (eds) (1995). *The Gender-Technology Relation. Contemporary Theory and Research*. London/Bristol, PA: Taylor & Francis

Johnson, D.G. (2010). Sorting out the Question of Feminist Technology. *Feminist Technology:* 6

McNeil, M. (2007). *Feminist Cultural Studies of Science and Technology*. London, UK: Routledge

Noble S.U. (2018) *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York, NY: NY Press

Noble, S. U., Tynes, B. M (eds) (2016). *The Intersectional Internet Race, Sex, Class, and Culture Online*. New York: Peter Lang

Norman, Don. (2013). *The Design of Everyday Things. Revised and Expanded Version*. New York, NY: Basic Books

Udén, M. K. (2017) Implementing Feminist Theory in Engineering: Obstacles within the Gender Studies Tradition. *European Journal of Engineering Education,* 42:3, 336-348

8. Doctoral student influence

Doctoral student influence in the course is ensured by course evaluation. The students are informed about the result of the evaluation and potential measures that have been made or are planned, based on the course evaluation.

9. Additional information

Further information about the course, as well as national and local governing documents for higher education, is available on the University's website.