

AK2202 Gender and Technology VT2023 (60502) (61577)

## **Gender and Technology**

Division of History of Science, Technology and Environment, KTH

### **Course Memorandum**

#### **Introduction**

Why are most engineers men? Are there “male” or “female” technologies, and if so, why? How are our ideas of gender shaped? This course takes a social, cultural, philosophical, and historical journey through the relationship between gender and technology. Challenging the assumption that technologies can ever be gender-neutral, either in their design or in their use, we will explore the co-construction of gender and technology in several fields. The course also provides a basic understanding of the interplay between gender and technology in history, for instance in the fields of organization of labour and the introduction of new technologies. The course incorporates critical gender awareness into understanding the processes of designing and developing new technologies.

#### **Course Organization**

The course is classroom course consisting of eight course events, each consisting of a lecture and an hour discussion and interaction in the form of a seminar or workshop. Most lectures will be on site. A few guest lectures will be on zoom. For those you will use the following Zoom room: <https://kth-se.zoom.us/j/64713352769>

The course schedule contains the dates, themes and list of readings. A short and an extended schedule are included at the end of this syllabus.

You will read texts before each lecture and formulate three questions. During the seminars you will discuss the lecture contents and the readings in more depth. The questions you have formulated will have to be handed in (uploaded to Canvas) before class.

The attendance of lectures and seminars is *mandatory*. Absence from more than one course event will have to be made up for through additional writing assignments.

#### **Course Literature**

The course literature consists of selected articles and book chapters that will be uploaded on KTH's learning platform Canvas. The readings are mandatory.

#### **Canvas**

We will use KTH's learning platform Canvas as a means and forum for communication.

#### **Assessment and Grading**

The requirements for passing the course are regular attendance (75%), active participation in class, and the submission and approval of all written assignments. The written assignments are as follows:

1. For most course events, you have to prepare three questions that arose in your mind following the reading, which you can also raise during the seminars. The purpose of these questions is to give the teachers an idea of the points you found interesting, surprising or puzzling in the course literature. The questions must be uploaded on Canvas at the latest by 18:00 on the day before class. The questions and other short assignments are mandatory. They will be graded P/F.

2. The final essay assignment consists of a written essay of around 2500 – 3500 words. You will analyse a topic of your own choice that relates to one or several of the themes discussed in the course. The final assignment is mandatory and will be graded A-F. Note the following dates:

2 May 2023 by 23.00

Upload essay 1 pager on CANVAS

8 May 2023

Peer –feedback exercise on 1 pagers on CANVAS with deadline at 12:00, 8 May 2023

23 May 2023 by 23.00

Deadline to upload essay on CANVAS

Here are some **essay guidelines**:

- Introduce the topic (the "so what?" question, catch the audience, make it interesting, why is it of general interest?)
- Establish the topic or the field of interest
  - a) asserting significance
  - b) stating current knowledgeScience is the art of producing convincing arguments, therefore, ground it in previous research and literature
- Summary of previous research (70% of the literature in your references should be from the course literature)
- Present your take (your own argument, contribution, twist)
- Argue your case
- Present your result and conclusions, discuss them (and their limitations), and situate them in the chosen field of knowledge.

Grading for the course will be based on the ECTS scale (A-F). The course examination is divided into two parts:

SEM1 – participation and overall activity in lecture and seminar sessions; questions and assignments. 4,0 credits, grade scale P/F.

UPP1 – final written assignment. 3,5 credits, graded A-F.

The common grade is determined through evaluation of both components, producing an overall A-F grade for the course.

The written assignment will be graded on the basis of your demonstrated ability to:

- refer to the course literature and, if needed, to other literature
- make correct references
- show an understanding and evaluation of concepts central to the course
- use the concept of "gender" in a meaningful way that goes beyond simple issues of "women", "men" or "equality"
- give examples of how attitudes towards gender and technology have changed over time
- clearly communicate an argument

For a higher grade (A-C) you should also be able to

- critically analyse statements or representations regarding gender and technological change applying the theoretical tools presented in the course

- critically evaluate the sources and literature used
- critically reflect on how their own as well as others' attitudes towards gender and technology may be formed through images of popular culture.

Your ability to reach these goals will depend on your ability to present and communicate your ideas in a clear way. It is important that your written assignments respect formal academic standards: by fully disclosing the literature and other source material used, by referencing the material in a distinct way, and by distinguishing your own ideas from those of others. Instructions on the standards of written academic work will be given to you in class.

### **Course Responsible Teacher**

Dr. Tirza Meyer, Postdoctoral researcher at the Division of History of Science, Technology and Environment at KTH.

Contact: [tirza@kth.se](mailto:tirza@kth.se)

Teaching assistant: Alicia Gutting

Contact: [gutting@kth.se](mailto:gutting@kth.se)

You should send course related correspondence to Tirza or Alicia.

### **Guest Lecturers**

Erik Ljungberg, Doctoral Student, KTH Division History of Science, Technology and Environment

Associate Professor, Anne-Kathrin Peters, KTH Learning in Stem

Klara Müller, Doctoral Student, KTH Division History of Science, Technology and Environment

Dr. Hannah Klaubert, Linköping University, Department of Thematic Studies

### **Examiner**

Prof Nina Wormbs, *Division of History of Science, Technology and the Environment, KTH*

### **Administration**

Questions regarding registration can be directed to [history@abe.kth.se](mailto:history@abe.kth.se)

### **Add-on Studies**

For advanced studies within this field you may apply for a master's thesis in history of science and technology after completing this course (examensarbete inom teknikhistoria, AK221X, 30 cp).

### **Avoiding Plagiarism**

At KTH we work actively to prevent plagiarism. The definition of plagiarism is using someone else's ideas or work without acknowledging it. This is a serious offence that can lead to suspension from the university. Also check your abilities by taking "Refero – an anti-plagiarism tutorial" which you can find at [http://www.ub.gu.se/ref/Refero\\_eng/1intro.php](http://www.ub.gu.se/ref/Refero_eng/1intro.php). During the seminars we will give information about the correct way to make references. Your papers submitted at the seminars and your final essay will be screened using a text-matching tool in Canvas.

### **Special Needs**

If you are in need of any special support because of a diagnosis of dyslexia, Asperger's syndrome, hearing impairment, etc., you should contact FUNKA. E-mail: [funka@kth.se](mailto:funka@kth.se) phone: 08-790 70 98. They will inform and help you concerning support measures.

## Course Schedule Overview

Course Schedule Overview Week	Date & Time	Topic & Teacher	On site or online	Assignment
12	21 March 13 -16	<b>1. Course introduction</b> Lecturer: Tirza Meyer, Alicia Gutting	On site B23	Reading
13	28 March 13 -15	<b>2. Intersectionality and fieldwork</b> Lecturer: Tirza Meyer	On site B23	Three questions
14	4 April 13-15	<b>3. Masculinity and Data feminism</b> Lecturer: Erik Ljungberg	On site B24	Three questions
15	BREAK			
16	18 April 13-15	<b>4. Gender in Engineering Education</b> Lecturer: Anne-Kathrin Peters	On zoom	Three questions
17	25 April 13-16	<b>5. Poster Presentation Session</b> Lecturer: Tirza Meyer & Alicia Gutting	On site V12	Poster presentation and feedback exercise
18	2 May 13-15	<b>6. Technology, Gender and Domestic Spaces</b> Lecturer: Klara Müller Deadline: essay 1 pager	On site B24	Three questions and essay one-pager
19	9 May 13-15	<b>7. Gender and Medicine</b> Lecturer: Alicia Gutting Deadline: essay 1 pager feedback	On site B23	Three questions
20	16 May 13 -16	<b>8. Queer Technologies</b> Lecturer: Hannah Klaubert From 15.00: Q&A and round-up before final submission: Tirza Meyer	On zoom	Three questions
21	23 May	<b>9. Essay final submission</b>	On Canvas	Essay submission

## Extended Course Schedule

### 1. Course introduction

Lecturers: Tirza Meyer, Alicia Gutting

We will start with a course introduction and overview, discuss expectations and work on a joint code of conduct. We then move on to an introductory lecture, covering some of the basic theories and concepts that we will use during the course. Preparation for this class consists of reading the following text (available through the library):

*Wajcman J. "Feminist theories of technology". Cambridge Journal of Economics, Vol. 34, No. 1, January 2010, pp. 143–152.*

### 2. Intersectionality and fieldwork

Lecturer: Tirza Meyer

Description: This lecture will discuss ways of discrimination in scientific fieldwork based on gender and bodily functions. We will learn about gender biases in science at sea, gender insensitive designs on sea-going ships, and barriers for disabled people at sea. We will seek to explore the core roots of why science at sea and fieldwork at large is ill equipped to attract and accommodate a diversity of participants.

Literature:

*Auma, Renis & Mariamalia, Ojwala & Rodriguez, Chavez & Neat, Francis & Kitada, Momoko & Buckingham, Susan & Schofield, Clive & Long, Ronan & Jarnsäter, Jill & Sun, Zhen. (2022). The Sea Change Needed for Gender Equality in Ocean-Going Research. Marine Technology Society Journal. 56. 10.4031/MTSJ.56.3.6.*

*Diva J. Amon, Zoleka Filander, Lindsey Harris, Harriet Harden-Davies, Safe working environments are key to improving inclusion in open-ocean, deep-ocean, and high-seas science, Marine Policy, Volume 137, 2022, <https://doi.org/10.1016/j.marpol.2021.104947>*

*Charlotte Silander, Ulrika Haake, Leif Lindberg & Ulla Riis (2022) Nordic research on gender equality in academic careers: a literature review, European Journal of Higher Education, 12:1, 72-97, DOI: [10.1080/21568235.2021.1895858](https://doi.org/10.1080/21568235.2021.1895858)*

### 3. Masculinity and Data feminism

Lecturer: Erik Ljungberg

Race, Gender and Risk Assessment: Machine Learning in the Criminal Justice System

Description: How can you use artificial intelligence in the criminal justice system? Do algorithms discriminate? In this lecture we will look at the rise of machine learning and artificial intelligence in our current society, where it comes from, and how it works, in very broad terms. Through looking at the implementation of AI-driven risk assessment instruments in the US court system, we will explore what is at stake when algorithms are used to assist human-beings in making important decisions.

Literature:

*Christian, B. (2021). Chapter 2: Fairness. In: The alignment problem machine learning and human values. W.W. Norton & Company.*

### 4. Gender in Engineering Education

Lecturer: Anne-Kathrin Peters On zoom

"Does technology education have a gender? Implications."

Short description: In the seminar, you will learn about how technology education can be seen to be gendered and you will discuss implications of this. How does gender in technology education affect different individuals and their learning? What consequences does this have for technology development and society?

**Read at least one of the following articles:**

Ottemo, A, Berge, M, Silfver, E. *Contextualizing technology: Between gender pluralization and class reproduction*. *Science Education*. 2020; 104: 693– 713. <https://doi.org/10.1002/sce.21576>

Salminen-Karlsson, M. (2011). *The Problem in the Eye of the Beholder: Working with Gender Reforms in Computer Engineering*. *International Journal of Gender, Science & Technology, Special Issue on Women in ICT*.

Andreas Ottemo, Allison J. Gonsalves & Anna T. Danielsson (2021) *(Dis)embodied masculinity and the meaning of (non)style in physics and computer engineering education*, *Gender and Education*, 33:8, 1017-1032, DOI: 10.1080/09540253.2021.1884197

Koch-Svedberg, G., Peters, A.-K. (2021) *Om utbildningens möjlighet att förändra den mansdominerade teknikulturen in Franzén, C., Tzimoula, D. (Eds.) Genus och Professioner, Studentlitteratur*

**5. Poster Presentation Session**

Lecturer: Tirza Meyer & Alicia Gutting

**6. Technology, Gender and Domestic Spaces**

**Teacher: Klara Müller**

Domestic spaces are often understood as sites of relaxation, comfort, for enjoying time with your loved ones – a “safe haven” from public spaces. At the same time, domestic spaces are filled with work, types of work that are gendered in numerous ways. During this class, we will delve in to the technologies of domestic spaces that for example shape how organization of housework is carried out. Drawing on both historical and contemporary examples to discuss the intersections of technology, gender and domestic spaces, we will, for example, discuss questions such as; What connections are there between the history of technology and the gendered norms of household work? How are gender norms “baked” into the artifacts of domestic spaces? And how does gender norms shape ideas and technologies of the so called “smart home”?

Ruth Schwartz Cowan. “The ‘Industrial Revolution’ in the Home: Household Technology and Social Change in the 20th Century.” *Technology and Culture*, vol. 17, no. 1, 1976, pp. 1–23. JSTOR, [www.jstor.org/stable/3103251](http://www.jstor.org/stable/3103251)Links to an external site.. (access via KTH library)

Ellen van Oost. “Materialized gender: How Shavers Configure the Users' Femininity and Masculinity”. In N. E. J. Oudshoorn, & T. Pinch (Eds.), *How Users Matter. The Co-Construction of Users and Technology*, pp. 193-208. MIT Press, 2003.

**7. The menopause – only a female problem?**

In this lecture we will discuss the menopause as a medical and as a social phenomenon. What does menopause actually mean? How is it affecting people privately as well as in their work life? Is the menopause only a female problem and where does this categorisation come from?

**Literature:**

Oudshoorn, N. E. J. (1997). *Menopause, Only for Women? the Social Construction of Menopause as an Exclusively Female Condition*. *Journal of Psychosomatic Obstetrics & Gynecology*, 18(2), pp. 137–144.

Rees, M., Bitzer, J., Cano, A., Ceausu, I., Chedraui, P., Durmusoglu, F., Erkkola, R., Geukes, M., Godfrey, A., Goulis, D. G., Griffiths, A., Hardy, C., Hickey, M., Lindén Hirschberg, A., Hunter, M., Kiesel,

L., Jack, G., Lopes, P., Mishra, G., Oosterhof, H., Pines, A., Riach, K., Shufelt, C., van Trotsenburg, M., Weiss, R. & Lambrinouadaki, I. (2021). *Global consensus recommendations on menopause in the workplace: A European Menopause and Andropause Society (EMAS) position statement*. *Maturitas*, 151, pp. 55–62.

Segal, S. J. & Mastroianni, L. (2003). *Is there a 'male menopause'?* In: *Hormone Use in Menopause and Male Andropause: A Choice for Women and Men*. Oxford: Oxford University Press, pp. 79–84.

Wren, B. G. (2015). *The history and politics of menopause*. In: Panay, N., Briggs, P., & Kovacs, G. (eds.) *Managing the Menopause: 21st Century Solutions*. Cambridge: Cambridge University Press, pp. 20–28.

## **8. Queer Technologies**

Lecturer: Hannah Klaubert

From 15.00: Q&A and round up before final submission: Tirza Meyer

### **Queer Technologies**

This session addresses the impact that new technologies can have on the LGBTIQ\* community. Working from two examples, reproductive technologies and social media, we examine both the liberatory and discriminatory effects that technological development has on queer lives.

Literature:

MacAulay, Maggie, and Marcos Daniel Moldes. "Queen Don't Compute: Reading and Casting Shade on Facebook's Real Names Policy." *Critical Studies in Media Communication* 33, no. 1 (January 1, 2016): 6–22. <https://doi.org/10.1080/15295036.2015.1129430>.

Mamo, Laura. "Queering the Fertility Clinic." *Journal of Medical Humanities* 34, no. 2 (June 2013): 227–39. <https://doi.org/10.1007/s10912-013-9210-3>.