PHD Courses

An overview

LINKÖPING UNIVERSITY
TEMA

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COURSE OVERVIEW

#	**Course name**	**Section**	**Period**	**Place**	**Language**	**Credits**
#	**Kursnamn**	**Avdelning**	**Period**	**Plats**	**Språk**	**Poäng**
2.1	Interdisciplinarity: ontology, epistemology and practice	Tema/ Department of Thematic Studies	Jan-feb 2018	Linköping University	English	3+2 HP /ECTS
3.1	Politics of vulnerability	Tema Genus/ InterGender	20 – 22 Feb 2018	Utrecht University	English	7,5 + 7,5 HP /ECTS
3.2	Write! Poetics, Passion, and Performativity in Academic Writing Practices	Tema Genus/ InterGender	April 18 – 20, 2018	Linköping University	English	7,5 + 7,5 HP /ECTS
3.3	Introduction to feminist theories and methodologies	Tema Genus/ Gender Studies	Not currently offered	Linköping University	English	7,5 HP /ECTS
3.4	Introducing Gender, nature, culture and feminist posthumanities	Tema Genus/ Gender Studies	Not currently offered	Linköping University	English	7,5 HP /ECTS
3.5	Introducing postcolonial and decolonial feminisms	Tema Genus/ Gender Studies	Not currently offered	Linköping University	English	7,5 HP /ECTS
3.6	Methodologies of postcolonial and decolonial feminisms	Tema Genus/ Gender Studies	Not currently offered	Linköping University	English	5 HP /ECTS
3.7	Methodologies of Gender, nature, culture and feminist posthumanities	Tema Genus/ Gender Studies	Not currently offered	Linköping University	English	5 HP /ECTS
3.8	Individual Reading Course(s)	Tema Genus/ Gender Studies	Upon Request	Linköping University	English	7,5 HP /ECTS
4.1	Critical child studies – theoretical grounds	Tema Barn / Child Studies	Vår 2018	Linköpings Universitet	Svenska	15 HP /ECTS
4.2	Children and childhoods in school and peer groups	Tema Barn / Child Studies	Vår 2019	Linköpings Universitet	Svenska	7,5 HP /ECTS

4.3	Children, childhood and health	Tema Barn / Child Studies	Not currently offered	Linköpings Universitet	Svenska	7,5 HP /ECTS
4.4	Children, childhood, and families	Tema Barn / Child Studies	Vår 2019	Linköpings Universitet	Svenska	7,5 HP /ECTS
4.5	Children, childhood and culture	Tema Barn / Child Studies	Vår 2019	Linköpings Universitet	Svenska	7,5 HP /ECTS
4.6	Critical child studies-methodological grounds	Tema Barn / Child Studies	Vår 2019	Linköpings Universitet	Svenska	15 HP /ECTS
4.7	Pilot study	Tema Barn / Child Studies	Höst 2019	Linköpings Universitet	Svenska/ English	7,5 HP /ECTS
4.8	Reading course	Tema Barn / Child Studies	Upon Request	Linköpings Universitet	Svenska/ English	7,5 HP /ECTS
5.1	Introduction to STS: Unpacking Technoscience Studies	Tema Teknik & Socialförändring	Autumn 2018	Linköping University	English	7,5 HP /ECTS
5.2	Advanced research methods for Thematic Studies	Tema Teknik & Socialförändring	Spring 2019	Linköping University	English	7,5 HP /ECTS
5.3	Introduction to Methods in Interdisciplinary Environments	Tema Teknik & Socialförändring	Spring 2019 (TBC)	Linköping University	English	6 HP /ECTS
5.4	Normativity as object and practice	Tema Teknik & Socialförändring	Spring 2019 (TBC)	Linköping University	English	6 HP /ECTS
5.5	Normativity	Tema Teknik & Socialförändring	Spring 2019	Linköping	English	6 HP /ECTS
5.6	Time-geography	Tema Teknik & Socialförändring	Not currently offered	Linköping & Göteborg Universitet	English	7,5 HP /ECTS
5.7	Infrastructure on contested terrain	Tema Teknik & Socialförändring	Not currently offered	Linköping University	English	6 HP /ECTS
5.8	Making publics	Tema Teknik & Socialförändring	Not currently offered	Linköping University	English	6 HP /ECTS

5.9	Individual Reading Course(s)	Tema Teknik & Socialförändring	Upon Request	Linköping University	English	7,5 HP /ECTS
6.1	Key concepts in environmental science and politics	Tema Miljöförändring	Nov-Dec 2018	Linköping University	English	10 HP /ECTS
6.2	Methodology in environmental science	Tema Miljöförändring	2019	Linköping University	English	5+5 HP /ECTS
6.3	Research planning and proposal writing	Tema Miljöförändring	Maj-Oct 2018	Linköping University	English	10 HP /ECTS
6.4	Individual Reading Course(s)	Tema Miljöförändring	Upon Request	Linköping University	English	7,5 HP /ECTS

1 CROSS-TEMA COURSES

At the Department of Thematic Studies (TEMA), major societal questions are studied and analyzed from an interdisciplinary perspective. Natural science, social science, technology and the humanities meet in the common aim to increase understanding and find solutions to important societal questions.

1.1 Interdisciplinarity: ontology, epistemology and practice

Objectives:

- After completing the course the PhD student will be able to:
- Reflect on the role and function of disciplines in the landscape of academic research
- Critically examine and analyse the historical relationship of interdisciplinary studies to the academic disciplines
- Give an account of the differences between different interdisciplinary ontologies, epistemologies and methodologies
- Problematise the role of interdisciplinary studies in the present-day research landscape
- Analyse and assess different interdisciplinary career paths and publication strategies
- Show the ability to apply relevant interdisciplinary methods in practice in a critical way.

Course content:

The focus of the course is on giving a broad overview of and critical in-depth knowledge of interdisciplinary studies and on highlighting interdisciplinary issues such as ontology, epistemology and practice. The course will touch on the role of disciplines in the academic world and how its scientific norms and knowledge ideals are created and maintained. Against this background the course problematises the emergence of interdisciplinary studies as a field of knowledge and a practice. In order to generate deeper understanding of the various traditions and knowledge claims of interdisciplinary studies, different interdisciplinary ontologies, epistemologies and methodologies are compared and contrasted with one another- The course analyses what empirical areas and research issues are made visible in interdisciplinary research and what methods and ways of working this field of knowledge builds on. The course also includes a critical analysis of the research policy situation of interdisciplinary studies and possible career paths for interdisciplinary researchers.
Contact Person: Madina Tlostanova madina.tlostanova@liu.se

2 TEMA GENUS / GENDER STUDIES

Unit of Gender Studies conducts research that deepens the understanding of complex processes that are enable, form and change women and men as cultural, societal, embodied and material beings. In focus are the meanings traditionally represented by the stereotypical binary split, and the interplay with other differences that create the power structures and practices of society.

2.1 Politics of vulnerability

The course will focus on vulnerability as a political matter. In contemporary Western contexts, vulnerability is situated within the realm of individual responsibility and neoliberal conceptualization of productivity where it occupies a place of undesired failure or error. This course will offer possibilities to re-conceptualize vulnerability beyond these existing normative and devaluing frameworks. It will ask how it is possible to engage vulnerability beyond such neoliberal logics and without falling into a trap of either celebration of vulnerability or its understanding as a state that is to be necessarily 'overcome'. The course will, hence, focus on an approach to the political question of vulnerability as both individual, psychical, and structural phenomenon and as one that is situated within specific local and global power relations. With the course we aim to address vulnerability as a process of living that materializes social individual and structural power relations while simultaneously opening possibilities for their reconfigurations. Thus, by providing an alternative approach to and a practical engagement with vulnerability – an approach that focuses on ambivalences, tensions, and spaces of in-between-ness – the course will offer the re-conceptualization of conditions of being as situated practices of living where the personal is political and the political is personal.
Contact Person: Edyta Just edyta.just@liu.se

2.2 Write! Poetics, Passion, and Performativity in Academic Writing Practices

The course will invite participants on an experimental feminist journey into different spaces for exploring intersections of poetic and scholarly writing and worlding practices. The spaces are defined , firstly, by theoretical reflections and examples of experimental writing in which the teachers in different ways are engaged, The paths to be taken are decolonial writing, situated writing, writing with desire, and autophenomenographic writing, all in different ways aimed at critically and affirmatively rethinking and reimagining the world. Secondly, the directions of the forays into writing will be defined through writing exercises, which will give participants the opportunity to explore ways to transgress borders of poetic and

scholarly writing, while engaging with their PhD research. About half of the time of the course will be dedicated to lectures and writing exercises, and half of the time to presentations and discussions of the participating doctoral students' research with a special focus on issues related to writing. The course will include two kinds of sessions: 1) lecture-discussion sessions in plenary, which also will include writing exercises, 2) group sessions with presentations of students' papers, where students are invited to present their doctoral research and receive comments from teachers and coparticipants.
Contact Person: Edyta Just edyta.just@liu.se

Tema Genus also has a number PhD courses that are not offered this semester but can be taught upon request or taken as 'reading courses':

2.3 Introduction to feminist theories and methodologies

The survey course introduces the new PhD students to a number of main feminist theories and methodologies thus offering them the necessary tools for working on their theses. The main approaches discussed are feminist cultural studies, writing as a method of inquiry, deconstructing methodological nationalisms, the influence of Gilles Deleuze's and Félix Guattari's ideas on contemporary feminist materialist theory, feminist pedagogies, sexual difference theories, queer theories and the science question in feminism.
Contact persons: Cecilia Åsberg: cecilia.asberg@liu.se
Madina Tlostanova: madina.tlostanova@liu.se

2.4 Introducing Gender, nature, culture and feminist posthumanities

This course explores the manifestos of Donna Haraway and pays particular attention to the figure of the cyborg, its ontological and interdisciplinary entanglements. The course provides the PhD students with key understandings of the research areas of feminist studies, cultural studies and science and technology studies and their forays into investigations of human and more-than human relationships that gave way to the feminist forms of the posthumanities. Providing thus a familiarity with foundational feminist body theory at the FS, CS and STS intersections of social justice, art/arts and science, it also introduces the next gen(d)eration of naturcultural research fields like medical humanities, multispecies studies, technohumanities, science and literature studies, and environmental humanities.
Contact person: Cecilia Åsberg: cecilia.asberg@liu.se

2.5 Introducing postcolonial and decolonial feminisms

The course focuses on the complex positionality of the postcolonial feminisms in relation to postcolonial theories/methodologies and major Western feminist methodological trends. It provides an in-depth understanding of the existing dialogues and differences between these options and maps out the possible intersections and alliances for the future among the postcolonial and other non-Western feminisms (African American, decolonial, Chicana, Muslim, transnational, postsocialist, third world, etc.). Students are analytically and critically working with various postcolonial concepts, terms and categories relevant for their future PhD projects.
Contact Person: Madina Tlostanova: medina.tlostanova@liu.se

2.6 Methodologies of postcolonial and decolonial feminisms

This course delves deeper into the intricacies of the postcolonial and decolonial feminist thought an activism focusing on the contemporary debates in decolonial thought and specifically in decolonial feminism including decolonial sexuality, interactions with posthumanism, indigenous research methodologies, decolonizing visuality, etc. We will deconstruct from decolonial/postcolonial/critical race/queer perspective the methodological approaches, concepts and ideas which are often unanimously shared by most contemporary feminist movements but can mean quite different things for different people and be both empowering and disempowering or meaningless. They include intersectionality, disidentification, coloniality of gender, border thinking, methodology of the oppressed, hybridity, strategic essentialism, pedagogies of crossing, slant activism, etc. Far from debunking or discarding these notions and tools we will try to nuance and enrich them with additional perspectives and make them more complex, inclusive and dynamic.
Contact person: Madina Tlostanova madina.tlostanova@liu.se

2.7 Methodologies of Gender, nature, culture and feminist posthumanities

Following a range of exciting new methodological developments in the fields of the posthumanities, this course explores the “situated knowledges” (Haraway 1991) and epistemological starting points available from within the large body of feminist philosophy and theorizing over the last five decades. It fleshes our the sex-gender dynamics that have given way to an intense set of debates, and thus in itself been an analytical engine of discovery and re-conceptualizations. Sex-gender analytics and its corollaries in the interlinked nature-culture, body-mind, matter-meaning, nonhuman-human analytics are mapped out for how they recently has given way to more-than-human, posthuman, material, affective, performative, material-discursive and other analytical turns in the humanities, and for how they relate the poststructuralist, linguistic and social constructionist modes of query. We dwell in particular with the

contextual, transversal, technoembodied, more-than-human and environmental humanities methodologies of material-semiotics, trans-corporeal analytics, citizen humanities, "field philosophy" and "storying exposure". Methodologies stemming from fields such as multispecies studies and feminist human animal studies, cultural media studies and science and technology studies, medical humanities, technohumanities, and environmental humanities, here meet up with eco- and bio-art and other more recent experiments in the intersections of art and science. The course allows not just for overviews and theory on the "how-to" and "why" (ethics), but we will put these methodologies to the test, and practically explore the allowances of "field philosophy" for an analytics of the gender, nature, culture conjunction and feminist posthumanities.
Contact person: Cecilia Åsberg: cecilia.asberg@liu.se

2.8 Individual Reading Course(s)

Based on the research problem of an individual doctoral thesis, Tema Genus's teachers also offer individual reading courses. In consultation with the PhD candidate, a reading list of relevant literatures and bodies of work that have high relevance for the thesis are constructed, read, discussed and examined.
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Madina Tlostanova: madina.tlostanova@liu.se

3 Tema Barn/Child Studies

3.1 Critical child studies – theoretical grounds

Course contents

The course aims to introduce theories and research relating to children and childhood and to introduce central concepts, such as child perspective and children's perspective. The knowledge field will be related to historical, political and social contexts. The differing approaches to children and childhood that have permeated research into children and childhood will be presented. A central theme aims to make visible how different theories are produced in a social, political and cultural context, which is characterised by varied actors, power relationships and ideologies. Another central theme relates to various ethical dilemmas in research about children.

Learning goals

Following completion of the course, PhD students shall be able to:

- differentiate between various theoretical perspectives in humanities and social sciences theory formation with relevance for the study of children and to present central research traditions relating to children, childhood and societal change
- discuss various theoretical perspectives on central scientific schools/traditions in child research and in some of the classic works within child research
- account for central theoretical concepts and discuss the links between scientific questions, the foundations for these in various theoretical perspectives and discuss the theoretical foundations for critical child research
- demonstrate the ability to scrutinise critically and problematise central questions within the areas and themes of the course

Contact persons: Anette Wickström, FUS, anette.wickstrom@liu.se
Eva Danielsson, admin. eva.danielsson@liu.se

3.2 Children and childhoods in school and peer groups

Course contents

The course is structured around a number of elements aimed at addressing schools and children's friendship groups as research fields from various scientific perspectives, and based on various research problems. A central feature of the course is the different meanings that research has given the concept of child perspective. The course deals with historical and sociological perspectives on how the school system has developed in relation to political changes and cultural concepts in society relating to children and childhood (with special emphasis on children's friendship group cultures). Differing educational approaches and learning theories are dealt with and discussed in relation

to societal concepts and children, children's actorship and the role of the friendship group in socialisation processes. Finally, we focus on theories and research into micro-processes and interplay in the everyday life in school and in the friendship group. By critically scrutinising schools and educational institutions from the viewpoint of several different questions during the course, different research methods will also be made visible.

Learning goals

Following completion of the course, PhD students shall be able to:

- account for and critically discuss various social science and historical theory formations in relation to schools and children's friendship group cultures
- account for and critically discuss various educational approaches and learning theories (including formal and information learning processes)
- account for and analyse micro-processes in the everyday life of schools and friendship groups
- identify relevant research problems in relation to schools, friendship groups and socialisation
- problematise the meaning of the central areas and themes of the course

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Eva Danielsson, admin. eva.danielsson@liu.se

3.3 Children, childhood and health

Course contents

The course introduces theories and research into children/adolescents and health. The knowledge field will be related to historical, political and social contexts. The differing approaches to children and childhood that have permeated the knowledge field will be presented. In addition, how borders for normality and divergence have been defined and renegotiated at different times and in different contexts will also be presented.
A central theme aims to make visible how knowledge is produced in a social and cultural context, which is characterised by different actors, power relationships and ideologies. Another central theme relates to research into child health, and ethical dilemmas are brought up.

Learning goals

Following completion of the course, PhD students shall be able to:

- differentiate between various theoretical perspectives within the area of children and childhood in health and medical care contexts
- differentiate between various research perspectives that have been used, supported and characterised the emergence of health, medical and social care of children and adolescents, including comparable institutions
- discuss the various theoretical perspectives on and definitions of health

- discuss various approaches to child health in a public health policy context, both historical and current
- analyse how health research and theories of child health are permeated by differing approaches to children and childhood
- analyse the meaning of concepts such as development, normality and divergence, seen in relation to children's physical and mental health
- discuss ethical dilemmas when the health of children and adolescents is the focus of research studies
- demonstrate the ability to scrutinise critically and problematise central questions within the areas and themes of the course

Contact persons: Anette Wickström, FUS, anette.wickstrom@liu.se
Eva Danielsson, admin. eva.danielsson@liu.se

3.4 Children, childhood and families

Course contents

The course is structured around a number of elements aimed at addressing the family as a research field from various scientific perspectives, and based on various research problems. A fundamental research problem relates to the family concept and the actual definition of family. At macro level, this also involves the relationship between state and family, as expressed in legislation and rules relating to family formation and child care, for example. The course will touch upon both historical changes and national differences, and also the values and family ideals that are expressed in official family policy. The everyday lives of families will also be studied. Finally, the course also deals with theory formation about family and society. By critically scrutinising families from the viewpoint of several different questions during the course, different research methods will also be made visible.

Learning goals

Following completion of the course, PhD students shall be able to:

- account for research into the everyday lives of families
- account for and critically discuss psychology and social science theory formations in relation to families
- discuss critically the relationship between family ideals and family policy
- analyse how the relationship between children, parents and the state is expressed in various contexts
- formulate relevant research questions in relation to family
- problematise family as a concept

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Eva Danielsson, admin. eva.danielsson@liu.se

3.5 Children, childhood and culture

Course contents

The course is structured around a specific child culture phenomenon, *Alice in Wonderland*. The purpose is to use the phenomenon of Alice in Wonderland to address child culture as a research field from different scientific perspectives, and on the basis of different research problems. The course will touch upon historical changes and national differences, and also the values and cultural ideals that are expressed in child culture products. Children's own cultural productions will also be studied. Additionally, a fundamental research problem relates to the child culture concept and the actual definition of child culture. At a macro level, the relationship between children/childhood and cultural policy, as expressed in cultural policy documents relating to accessibility, age and legislation will be discussed. Finally, the course also deals with theory formation about (visual) culture, film, materiality, the "queerness" of childhood, and new media. By critically scrutinising and studying in depth one child culture phenomenon from several different viewpoints, questions and aspects during the course, different research analysis methods will also be made visible.

Learning goals

Following completion of the course, PhD students shall be able to:

- Account for and critically discuss theory formation about and definitions of child culture
- Account for different attitudes towards child culture in a cultural policy context
- Critically discuss childhood ideals in a child culture context
- Analyse the materiality of child culture (visual, medial, material)
- Formulate relevant research problems relating to child culture
- Problematise child culture from a social science perspective, with focus on gender, ethnicity, sexuality, children and childhood

Contact persons: Anette Wickström, FUS, anette.wickstrom@liu.se
Eva Danielsson, admin. eva.danielsson@liu.se

3.6 Critical child studies – methodological **grounds**

Course contents

The course aims to introduce theories and research relating to children and childhood and to introduce central concepts, such as child perspective and children's perspective. The knowledge field will be related to historical, political and social contexts. The differing approaches to children and childhood that have permeated research into children and childhood will be presented. A central theme aims to make visible how different theories are produced in a social, political and cultural context, which is

characterised by varied actors, power relationships and ideologies. Another central theme relates to various ethical dilemmas in research about children.

Learning goals

Following completion of the course, PhD students shall be able to:

- differentiate between various theoretical perspectives in humanities and social sciences theory formation with relevance for the study of children and to present central research traditions relating to children, childhood and societal change
- discuss various theoretical perspectives on central scientific schools/traditions in child research and in some of the classic works within child research
- account for central theoretical concepts and discuss the links between scientific questions, the foundations for these in various theoretical perspectives and discuss the theoretical foundations for critical child research
- demonstrate the ability to scrutinise critically and problematise central questions within the areas and themes of the course

Contact persons: Anette Wickström, FUS, anette.wickstrom@liu.se
Eva Danielsson, admin. eva.danielsson@liu.se

3.7 Pilot study

Course contents

The course aims to give PhD students the opportunity and chance to test a thesis idea on a small scale. It is about implementing a scientific work, where part of the scientific process is tried. The pilot study is intended to provide a rewarding start to individual PhD students' thesis work, and the learning goals can therefore be fulfilled in various ways. It may concern testing a type of empirical material in relation to the research question, a method or a way of gaining access to a certain field. It may also be about testing theoretical perspectives in relation to a proposed study, or conducting a research review to identify a knowledge need and to formulate the purpose of a study. Another option is to write out the background and context for the study, and then use this to formulate an overall research problem, as well as purpose and questions. The work is presented in the form of a written report, and forms the basis for collegial review and discussion of how the planned research project can continue to be implemented.

The pilot study is planned and conducted in close cooperation with the supervisor. The pilot study covers a total of 13 weeks when the holiday allowance is 5 weeks.

Following completion of the course, PhD students shall be able to:

- Demonstrate the ability to plan and implement a minor pilot study for the thesis work
- Formulate relevant research problems for the type of study chosen
- Demonstrate the ability to evaluate critically and problematise central questions for the pilot study
- Demonstrate the ability to present the pilot study and discuss the challenges it indicates
- Produce a scientific work, where part of the scientific process is tried

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Eva Danielsson, admin. eva.danielsson@liu.se

4 TEMA TEKNIK OCH SOCIAL FÖRÄNDRING / TECHNOLOGY AND SOCIAL CHANGE

At Tema T we critically analyse both technology's influence on and the different types of understandings that are constructed around technology in and by society. Our research deals with how social actors create and exploit technology, and how technical change is woven together with cultural patterns, daily life, politics and the economy.

4.1 Introduction to STS: Unpacking Technoscience Studies

Course objectives

The course gives an introduction of theories and approaches that are central for researching the interplay between technology and society. This course on Science and Technology Studies (STS) include central areas such as SSK, SCOT, ANT, Sociotechnical systems, and User- producer perspectives. In addition to reading and discussing key texts, the course participants will also be familiarised with the criticism and debate surrounding key theoretical positions of the field. The course is designed to provide ample opportunities for reflection and discussion of perspectives, theories and concepts in STS, particularly as they relate to the course participants' own research interests.

On completion of the course, the PhD candidate will be able to:

- approach key STS theories and to examine empirical applications of these conceptualizations;
- evaluate strengths and weaknesses of these theories; and
- form a basis for personal opinion on the relevance of the theories in relation to the PhD candidate's dissertations topic.

Content

The course centres on STS-perspectives focusing on processes related to scientific knowledge production and technological change. This translates into the dominance of micro- or meso- perspectives in where the interpretations, practices and actions of various involved actors are analysed and problematised. The course thus emphasises theoretical perspectives and concepts that can be used to understand "science and technology in the making". The course participants will be constantly challenged to discuss, critically examine and compare various perspectives, approaches and concepts.
Contact Person: Claes-Fredrik Helgesson, claes-fredrik.helgesson@liu.se

4.2 Advanced research methods for Thematic Studies

This course aims to encourage a critical and reflexive approach to methods. This approach includes the following propositions: that methods can no longer be thought of as neutral tools for their dispassionate application to objective realities; that methods embody (often deep rooted) assumptions and choices, so that their use builds in particular ways of apprehending the world; that in practice, the use of methods is difficult and messy but, rather than presenting problems, this can turn out to be productive and insightful for research.

In short, the course objectives are
1. To continue the introduction of a range of qualitative methods (including mainly ethnography, documentary and textual analysis) through lectures, exercises, demonstrations and practical work
2. To enable students critically to assess the key assumptions underlying the selection and use of different methods
3. To introduce some issues and problems in the philosophy of social science and humanities.
4. To provide some ways of thinking about what and whom research is for: how does the use of research methods perform/enact audiences for the research
These last three objectives are especially important because qualitative research (especially) raises questions of how you demonstrate or prove that what you say about a research setting is true or important or of value.
Contact Persons: Steve Woolgar, steve.woolgar@liu.se
Corinna Kruse, corinna.kruse@liu.se

4.3 Introduction to methods in interdisciplinary environments

Methods are back in full focus within the social sciences and humanities. Partly because methods are thought to be 'in crisis'. While scholars are going through the cumbersome work of sending out surveys, travelling to remote places to conduct in-depth interviews, and find themselves facing methodological struggles of making sense of the details of their material, commercial environments and governments have taken on big data as common practices within their business development and the governance of public spheres. If the social sciences and humanities were traditionally seen as experts in methods for sourcing the social, they are increasingly seen as a traditional body of knowledge workers that are both missing out on the cutting edge of methods fail to get access to the best and biggest data sources. Hence, the 'crisis in methods'.

Seeing social science methods as 'in crisis' is however based on a scientistic understanding of methods, that considers technical sophistication to be a sign of relevance. Fortunately another reason why methods are back in full focus is because they are increasingly seen as exciting sites for rethinking the production of social science knowledge. This kind or reflexive turn to methods, that comes under headings like 'the social life of methods', or 'inventive methods', etc. takes social science methods serious as experiments in knowledge production, with the social scientists fully implied in the knowledge production. How to make sense of an interview about how people experience the risk of ionizing radiation, that consists of a respondent much more interested in talking about her new job at a hamburger restaurant and chances of promotion, while her cat is playing with the recording device and the interviewer not daring to intervene because of her dog giving him a stare? (Michael 2012) Or how to understand an interview with a respondent who in no way intends to answer any question whatsoever regarding genetic concerns the scholars want to talk about? (Callon and Rabeharisoa 2004) Or ethnographers getting laughed at when presenting their research to the people in their fields? (Verran 2001) What can we learn from the unexpected interactions that our methods lead us into? And how can such interactions lead to a better understanding of both our topic as well as our role in relation to our empirical topics?

To address those questions, this course offers a broad, experimental and reflexive approach to methods. On the one hand there will be elements of 'how to/hands on' regarding a wide range of methods that are used in interdisciplinary environments, such as surveys, ethnography, discourse analysis, interviews, and time diaries. Participants will work with those methods through discussing their nuts and bolts with seasoned scholars but most importantly by trying out the methods involved. The point of trying these methods out is not to make participants proficient in the details of these methods, but rather to give them an experiential understanding of what different methods do and

make visible, as well as undo and obscure. On the other hand, the course will therefore discuss these methods by taking published articles drawing upon that same method to 'reverse engineer' how that paper came about and how this relates to the students' experiences with those methods.

Furthermore, we will explore how most methods quickly become sites of epistemic preference (e.g. the recent STS preference for ethnography as a 'better' method that allows the scholar to 'really' see what is going on). This course does the necessary groundwork for the more in-depth *Advanced Research Methods for Thematic Studies* course in the second semester.
Contact persons: Teun Zuiderent-Jerak, teun.zuiderent-jerak@liu.se
Eva Danielsson, eva.danielsson@liu.se

4.4 Normativity as object and practice

Content
The course gives an introduction to theories and approaches that are central for researching normativity within the field of technology and social change. This includes themes such as the co-emergence of normativity and technology; embodied and enacted normativity in practices; different ways to engage with normativity within and of research, and self-reflexivity on normativity in the course participant's own research.

The course centers on theoretical perspectives, approaches and concepts that can be used to understand normative dimensions of "science and technology in the making". This include perspectives and positions within STS, valuation studies, feminist phenomenology, feminist science studies, postphenomenology, moral philosophy, urban and energy planning.

The course participants will be constantly challenged to discuss, critically examine, and compare various perspectives, approaches and concepts. They will read and discuss key texts and be familiarized with the criticism and debate surrounding core theoretical positions on whether and if so how to engage with issues of normativity, technology, and social change. They will be given ample opportunities for reflection and discussion of perspectives, theories and concepts in previous research on normativity within the field of technology and social change studies, and relate this to their own research.

Course objectives

- On completion of the course, the PhD candidate will be able to:
- approach key theoretical positions on normativity in the area of technology and social change and examine applications of these positions;

- evaluate strengths and weaknesses of these theoretical positions;
- form a basis for personal opinion on the relevance of these theoretical positions in relation to the PhD candidate's dissertation topic.

Contact Person: Kristin Zeiler, kristin.zeiler@liu.se

4.5 Normativity course

Content

The course gives an introduction to theories and approaches that are central for researching normativity from and within the humanities and social sciences, specifically when such research engages with science, medicine, and technology. Normativity is understood broadly as including norms, values, and ethical and/or political features of dimensions where norms and values are expressed, enacted or argued for.

The course includes themes such as the co-emergence of normativity and technology; normativity's position in a western, colonial discourse; normativity and policy-work; embodied and enacted normativity in practices; scientific tolls of normative visions; different ways to engage with normativity within and of research, and self-reflexivity on normativity in the course participant's own research. It includes perspectives and positions within STS feminist science studies, feminist phenomenology, philosophy of technology and medicine, climate policy research, and urban energy planning.

The course participants will be constantly challenged to discuss, critically examine, and compare various perspectives, approaches and concepts. They will read and discuss key texts and be familiarized with the criticism and debate surrounding core theoretical positions on how to engage with issues of normativity in research. They will be given ample opportunities for reflection and discussion of perspectives, theories and concepts in previous research on normativity, and relate this to their own research.

Course objectives

On completion of the course, the PhD candidate will be able to:

- approach key theoretical positions on normativity in the humanities and social sciences, specifically when such research engages with science, medicine, and technology;
- describe similarities and differences between these positions, and critically engage with strengths and weaknesses of these theoretical positions;

- form a basis for personal opinion on the relevance of these theoretical positions in relation to the PhD candidate's areas of research interest;
- critically and contructively reflect on the issue of societal impact.

Contact person: Kristin Zeiler, kristin.zeiler@liu.se

Tema Teknik also has a number PhD courses that are not offered this semester but can be taught upon request or taken as 'reading courses':

4.6 Time-geography – theoretical approach, notation system and methods

Time-geography is one of the most internationally recognized contributions of Swedish human geography during the last 50 years. There are time-geographically inspired researchers around the world and the interest in time-geography has grown during the last decades. The time-geographic approach, with its methods and special notation system is applied in many different areas, like studies of individuals' and households' everyday life, division of labor in households, activity patterns at individual and aggregate levels, health and disabilities, migration nationally and internationally, transportation systems, policy formation, energy use in buildings and transportation, communication (including ICT), urban and regional accessibility, resource use and environmental effects of human activities and work organization in industry and services. It is interdisciplinary and is used by researcher in disciplines like social work, occupational therapy, political science, pedagogics, psychiatry and engineering apart from in human geography. The aim of the course is to make the PhD candidates familiar with the time-geographical approach, its development and methods and to exemplify how the approach has been used within various areas of application and in different disciplines. During the course the PhD candidates will have opportunities to explore and use time-geography in relation to their work on their thesis.

Contact Persons: Kajsa Ellergård, kajsa.ellegard@liu.se
Eva Danielsson, eva.danielsson@liu.se

4.7 Infrastructure on contested terrain

Infrastructure is multiform and ubiquitous. We live in environments that are laced with infrastructures: roads, trains, power grids and power plants, clinical practice guidelines, sewers, mobile phone networks, wifi hotspots, or water pipelines. Infrastructures materially integrate societies, while at the same time they come to symbolise nationhood and even modernity. The British empire was materialised in steam train networks and telegraph lines. The conquest of the American West similarly solidified in train tracks, telegraph roads and later electrification. In everyday use, infrastructures

often pass unperceived (or unnoticed). We casually rely on the presence of electricity or running water, roads, telephone and the internet. We do not seem to want to see infrastructures: electricity wires are often hidden from view, pipes are behind walls or under floors, and communication networks become invisible in the metaphoric 'cloud'.

However, the invisibility of infrastructures easily leaves out of sight how infrastructures produce certain integrations and exclusions. They may be infrastructures for some while others are falling through the cracks. Infrastructures are also contested political terrains: they shape how we communicate, how we move, how we lead our everyday lives, and they are interlaced with political and economic power relations. Many of today's most pressing challenges, whether climate change, the future of health systems, or global economic disparities are deeply interrelated with our (in)capacity to change current infrastructures. This course will challenge, explore, and think about the (in)visibilities of infrastructure, while also reflecting on the challenges of building alternative and transforming current infrastructures. We will explore infrastructures 'from below' and ask how they are populated and used – often simultaneously such as in households. We will discuss different ways of conceptualizing infrastructures and how they help us understand contemporary society and issues of social change. We will link technological developments to cultural and historical processes, such as in the role of infrastructure in the construction of nationhood and as harbinger of modernity, and to recent issues in areas such as the research system, health care, energy or climate change.

Contact Persons: Harald Rohracher, harald.rohracher@liu.se
Eva Danielson, eva.danielsson@liu.se

4.8 Making publics: entanglements of technology, politics, problems and conflicts

The course gives an introduction to theories and approaches that are central for researching publics within the field of technology and social change. It centers on theoretical perspectives, approaches and concepts that can be used to understand dimensions of science and technology in the making. The course include the themes of bodies, social movements, devises and naturecultures to be explored with specific case studies. Each week will introduce the students to a specific theme with certain cases. This will be done in-depth with appropriate literature and a teacher who knows the attached field of research in which the case is situated. The themes of bodies, social movements, devices and naturecultures are used, since they speak to the theme of the course in varied ways, while also enabling the course to draw upon the strong expertise there is within Tema T of these cases. They provide important focal points to understand intersections of technology, problems and publics. The aim of the course is to discuss, critically examine, and compare various perspectives, approaches and

concepts. Course participants will get instructions and work individually during the week and be examined at the end of each week. During these four weeks we will explore and practice four different skills that we suggest are important when understanding and taking part in issues of technology, problems and publics. Participants will be trained in writing debate articles, creating democratic tools, engaging in social media and practicing role play. These different forms of skills will be intertwined into workshops during the course. Further the participants will read and discuss key texts in an in-depth way to be discussed at all the seminars and even more in detail at a literature seminar. They will be given ample opportunities for reflection and discussion of perspectives, theories and concepts and relate this to their own research.

On completion of the course, the PhD candidate will be able to:

- approach key theoretical positions on publics in the area of technology and social change and examine empirical applications of these positions;
- evaluate strengths and weaknesses of these theoretical positions;
- be aware of and test skills and technologies which are part of making publics;
- reflect upon the relevance of making public(s) in relation to various political and theoretical positions in connection to the PhD candidate's dissertation topic.

Contact Persons: Teun Zuiderent-Jerek, teun.zuiderent-jerak@liu.se
Eva Danielsson, eva.danielsson@liu.se

4.9 Individual Reading Course(s)

Based on the research problem of an individual doctoral thesis, Tema Teknik's teachers also offer individual reading courses. In consultation with the PhD candidate, a reading list of relevant literatures and bodies of work that have high relevance for the thesis are constructed, read, discussed and examined.

Contact persons: Teun Zuiderent-Jerek, teun.zuiderent-jerak@liu.se
Eva Danielsson, eva.danielsson@liu.se

5 TEMA MILJÖFÖRÄNDRING / ENVIRONMENTAL CHANGE

Tema Miljöförändringar (Tema M) är en plattform för samhällsaktuell, problemorienterad och kritiskt tolkande miljöforskning och utbildning. I en tid när snart sagt all natur bär spår av mänsklig verksamhet är tillståndet i miljön starkt sammanlänkat med samhällsutvecklingen. Idag uppfattas inte längre miljöproblem som 'problem i naturen' utan även som komplexa samhällsproblem som ställer nya krav på vetenskaplig bredd, integration och problemlösning.

5.1 Key concepts in environmental science and politics

The focus of the course is on concepts that have been central to analysis and societal dialogue in natural science, social science and humanities within in environmental sciences as well as public debates. Throughout the course, the students will explore how these concepts are defined and used in both science and policy. Through the interdisciplinary approach, the course will address both natural and social science perspectives on the concepts.

Having completed the course, the student should be able to:

- Demonstrate a conceptual understanding of environmental science
- Critically assess how these concepts are used within scientific practices and discussions as well as in policy debates.
- Reflect on trends, contestations and interpretations of selected key concepts in environmental science.

Course content

The focus of the course is on concepts that have been central to analysis and societal dialogue in natural science, social science and humanities within in environmental sciences as well as public debates. Throughout the course, the students will explore how these concepts are defined and used in both science and policy. Through the interdisciplinary approach, the course will address both natural and social science perspectives on the concepts.

Contact Person: Björn-Ola Linnér, bjorn-ola.linner@liu.se

5.2 Methodology in environmental science

Denna kurs ger en introduktion till kvantitativa och kvalitativa metodologier. Doktoranderna får reflektera över samspelet mellan metodval, forskningsdesign och materialanalys. Kursen problematiserar även vetenskapens roll i samhället. Kursen är uppdelad i ett gemensamt och ett individuellt kursblock. Under det

individuella kursblocket får doktoranderna fördjupa sig i en metod som är särskilt relevant för det egna avhandlingsarbetet.

Course objectives
After completing the course, the PhD student should be able to:

- discuss and account for different methodological approaches used in environmental science and how method is linked to aim and questions in research design
- critically evaluate strengths and weaknesses of different methodological approaches
- design and carry out an analysis where a specific research question is methodologically explored, systematically and with high methodological awareness following established practice

Course content
This course offers the PhD student knowledge of different methodological approaches to both qualitative and quantitative scientific knowledge.

Methodological approaches (5hp)
The course enhances knowledge of different methodological approaches in environmental science, including the interplay between ontology, epistemology and method and between method and aim/ questions in research design. The PhD students are encouraged to apply critical reflections in their own research designs. Through continuous discussions, drawing on examples from previous research, the PhD students gain a deeper insight into, and understanding of, different methodological approaches, how they are used and their shortcomings. This will be discussed in light of the role that science plays in society.

Methodological application (5hp)
The second part of the course will be devoted to the practice of applying a specific method, relevant to the individual PhD-student's research. The PhD student will hand in a plan for the analysis that includes a description of the research question, selected methodological approach and the planned work. Thereafter the analysis will be carried out, exploring a specific research question methodologically, systematically and with high methodological awareness following established practice. The individual study will be examined through an individual paper.
Contact Persons: Åsa Danielsson, asa.danielsson@liu.se
Sofie Storbjörk, sofie.storbjork@liu.se

5.3 Research planning and proposal writing

Under denna kurs formulerar och presenterar doktoranderna en forskningsplan för det egna avhandlingsarbetet och får härmed möjlighet att utveckla avhandlingens syfte, frågeställningar, metod, material och analysram.

Course objectives
After the course, the PhD student should be able to:

- Create and present a scholarly analysis and synthesis of a research area
- Review research plans in terms of scholarly precision and appropriateness of methods
- Assess research ethics in proposed projects.
- Assess possibilities and limitations of research and its role in society
- Reflect on how a complex research issue can be communicated and discussed in the scientific community and in society

Course content
The main content of the course is for the PhD students to review the research area in which their indented thesis is situated, define specific aim for the thesis and explore suitable methods for the thesis work. Additional content in the course are scientific writing, oral presentations, ethical considerations for research, the role of research in society and how research issues can be communicated and discussed in society.
Contact Person: Alex Enrich Prast, alex.enrich.prast@liu.se

5.4 Individual Reading Course(s)

Based on the research problem of an individual doctoral thesis, Tema Miljö's teachers also offer individual reading courses. In consultation with the PhD candidate, a reading list of relevant literatures and bodies of work that have high relevance for the thesis are constructed, read, discussed and examined.
Contact persons: Alex Enrich Prast, alex.enrich.prast@liu.se