Compulsory course credits: Theme descriptions and expected learning outcomes

This appendix describes and defines the thematic content and expected learning outcomes associated with the compulsory course component in third-cycle studies in industrial design. These are applicable to both to the syllabus with a degree of doctor and the syllabus with a licenciate degree in Industrial Design as the final objective.

The purpose of these descriptions and definitions is to support the 3rd cycle student, the main supervisor, and the examiner, in planning, conducting and assessing learning activities within each of the thematic areas.

Courses
Third-cycle studies with a degree of Doctor in Industrial Design as the final objective consist of a course element worth 70–100 credits, including both compulsory course credits and elective course credits. Taking into account the doctoral student's prior knowledge, research specialisation and interests, the course element is designed in consultation between the supervisor and the doctoral student, and is added to the individual study plan.

The *compulsory course component* can be divided into three groups: subject-specific course credits, faculty-wide courses, and credits for participation in the department's Research seminar. The compulsory course credits can be obtained either by participating in courses organised by the department and the Faculty of Science and Technology, or –as arranged by the doctoral student and in accordance with the supervisor's assessment– through courses offered by another department, faculty or university either in Sweden or abroad, acquiring essentially equivalent knowledge. The course credits can also be obtained through other kinds of activities which support the student's learning within the compulsory thematic area and which are possible to assess in relation to the expected learning outcomes. Such activities could be, but are not limited to, workshops, conference papers, presentations, and teaching sessions in education, and should always be planned together with the supervisor.

The courses offered at the faculty and the department will vary with time. Information about forthcoming courses will be available on the faculty's and department's respective websites.

Subject-specific course credits aim to provide greater depth within the field of design and the chosen research specialisation (at least 15 credits for a degree of licentiate, and at least 30 credits for a degree of doctor). The compulsory subject-specific course credits are linked to the local objectives for the education, and should include a balanced combination of credits covering the following five areas:

- design research methodology, with focus on practice-based design research
- design theory and philosophy
- use and users, with focus on user involvement and participation
- design history
- design research ethics

Faculty-wide courses consist of courses that develop generic competences. These are decided on and provided by the Faculty of Science and Technology:

- Introduction for doctoral students at the Faculty of Science and Technology, 1 credit
- Writing science, 5 credits
- Oral presentation, 1 credit
- Philosophy of science, 2 credits
- Introduction to research ethics, 2 credits

Seminar participation in Umeå Institute of Design's research seminar constitutes a separate 3rd cycle level course, which is compulsory for doctoral students in accordance with the established course syllabus. The course is worth 8 credits for the degree of doctor, and 4 credits for the degree of licentiate.

Other course credits are elective, and are decided on by the supervisor in consultation with the doctoral student based on their relevance to individual learning outcomes and the focus of the thesis work, and are always to be included in the individual study plan. Doctoral students who teach during their third-cycle studies must take a course in higher education pedagogy.

Design research methodology, with focus on practice-based design research

Existing UID course responding to this theme: Methodology in Artistic and Practice-Based Design Research, 7,5 credits

Contents
Research methodology, distinct from research methods, refers to the overall framework and structure of the research process. Whereas designers (design researchers included) typically have access to a vast range of methods, the question of how a given set of methods comes together to form a specific line of inquiry is generally less obvious. Often in the case of design, this integrative role is played by 'practice', i.e. that we have acquired – through training and experience – an over-arching way of working, of organising everything from concepts and information to physical materials, that we use as our platform for integrating and even creating methods as we go.

When engaging in research, the way that this integration happens is central to whether what we produce will actually make a different or not – and thus something we need to be able to articulate, explain, share and critically reflect upon. Further, since the purpose of research is different from professional practice, one can not assume that basic rationales of design as practiced will be equally valid as a research methodology. At the same time, much of what typically characterizes design practice will be essential also to what we may think of as a design research practice, such as artistic processes and the making of both things and theories, and in how notions of experience and the experiential are central.

This thematic area is about methodological issues in contemporary experimental, artistic and practice-led design research with focus on interactions between theory, practice and knowledge. The overall purpose is not to advance just one foundational methodological approach for design research, but to acknowledge a plurality of established research

approaches and what might be called ’best practices’, that is, successful examples of how apparent tensions between theory and practice, academic research and design experimentation, can be addressed.

Expected learning outcomes
After completing the course credits, students will demonstrate the ability to:

Knowledge and understanding

- account for and discuss key methodological issues in practice-based and artistic design research in general, and issues pertaining to interactions between theory and practice in such research in particular.

- describe and discuss research through design and programmatic approaches to design research

Competence and skills

- locate and articulate methodological issues in one’s own research, as well in the research of others.

-practically apply and critically discuss research through design methodology in a learning situation

Judgement and approach

- select, adapt, and account for methodological frameworks and design research programs in response to given research aims and requirements.

Design theory and philosophy

Existing UID course responding to this theme: Philosophy of/on/in/through Design, 7,5 credits

Contents

This thematic area aims at a deepened understanding of design theory and design philosophy, and of theory and philosophy in design. This entails approaches to working with theory and philosophy in design research, including basic insights into philosophical methods and ways of working with theory development. The overall objective of this theme is to give the student a more developed ability to understand, articulate and critique conceptual and philosophical matters in design. This also includes how to achieve a more consistent and coherent argument, and how to structure and articulate the logic of a design inquiry.

While engaging with both contemporary examples as well as selections of philosophical works and positions that have had a (historical) impact on design discourse is needed, the thematic area is not meant to give the students a comprehensive overview of all philosophy relevant to design. Rather, the purpose is to inquire into relations between design, theory and philosophy, and in this way approach questions of what is 'design philosophy' and 'design theory'.

Expected learning outcomes

After completing the course credits, students will demonstrate the ability to:

Knowledge and understanding

• account for theoretical and philosophical issues in design, and exemplify approaches and traditions of design philosophy and theory.

Competence and skills

• read and critically analyse and discuss academic texts from design philosophical and design theoretical perspectives
• locate, articulate, and discuss theoretical and philosophical issues in one's own research as well as in the research of others, applying design philosophical stances and approaches.

Judgement and approach

• structure and articulate key theoretical issues and potential contributions of a design inquiry in relation to design philosophical and/or design theoretical approaches and traditions.

Use and users with a focus on user involvement and participation

Existing UID course relating to this theme: Use & users, 7,5 credits

Content:

This thematic area concerns design research related to use and users, people and practices. Focusing on approaches and methods within participatory approaches and user-centered design, the overall objective is a deeper understanding of rich and unfolding relations between design and use, between design processes and people's practices. This area is also meant to familiarize the PhD student with research methodologies stemming from the behavioral and social sciences, and how these have been incorporated, adapted and transformed in design.

Scandinavian design traditions and approaches, of which UID is part, have since early industrial design often been characterized by explicit ambitions to design for human and social needs, including matters related to influence and participation, democracy and well-being. Acknowledging this heritage, this thematic area is grounded in emancipation rather than extraction with respect to why and how design engages with people. The purpose is for the doctoral student to develop a repertoire of approaches for, and an extensive understanding of, the complex relations between design and use, and of the possibilities and limitations of design and design research in relation to these.

Expected learning outcomes

After completing the course credits, students will demonstrate the ability to:

Knowledge and understanding

• account for central issues and traditions in user-centered and participatory approaches to design and design research.

• identify basic research methods and perspectives applied in the social and behavioural sciences and describe how these have informed design research

Competence and skills

• locate, articulate and through design actively engage in issues pertaining to the relations between design and use, between designer and user, in one's own research, as well in the research of others.

• identify and make use of design research methodology related to the behavioral and social sciences.

• plan, carry out, critically analyze and evaluate user-centered and participatory design research processes.

• articulate and discuss possibilities and limitations of incorporating, adapting and potentially transforming research methods stemming from the social and behavioral sciences in design research.

Judgement and approach

• articulate, assess, and through design approach diverse human and social needs, including matters of participation, democracy and well-being.

• describe and discuss complex relations between design and use , including how to creatively and critically position oneself, and how to create space and possibilities for others in participatory design processes.

Design history

Existing UID course relating to this theme: Design histories , 7,5 credits

Contents
This thematic area concerns histories of design and design research, highlighting the development of ideas, concepts, and approaches that have guided the evolution of industrial design since the 19th century in Europe. Specifically, it deals with how Western and Scandinavian industrial design has articulated, related to and reflected upon its past, present and future. As such it is less oriented towards the historical narratives that have evolved largely under the umbrella of art history, and is more attuned towards historical examples of how industrial design itself has articulated its project, purpose, positions as well as processes and products. The overall purpose is not to give us a comprehensive overview of design histories relevant to industrial design, but to inquire into examples that have had a significant influence on current design practices and forms of design research.

This thematic area also serves to introduce design historical methodologies of searching for and analysing historical materials, with an emphasis on written texts but also including visual and physical materials. These materials are considered as historical in the sense that they form a part of design's and designing's history, not in the sense that they necessarily directly address historical matters. Indeed, historically significant design literature also includes manifestos, vision statements, essays, accounts of educational curricula, and other such documented historical projections into what then seemed to be the future.

Expected learning outcomes
After completing the course credits, students will demonstrate the ability to:

Knowledge and understanding
- Account for different approaches to historical narratives of the history of design and design research.
- Discuss the relevance and purpose of the study of history to the practice of design in relation to developing design practices.

Competence and skills
- Articulate historical research questions pertinent to the fields of design and design research, applying design historical perspectives and relating these to design historical contexts and ideas,
- Critically examine one's own design research and design practice through drawing forth the historicity of design doing and thinking,
- Apply basic research methodologies and perspectives used in historical studies and the humanities, such as for example archival studies, source criticism, and contextual analysis.

Judgement and approach
- Identify issues or concepts in contemporary design practices and societal contexts and critically reflect on and address the historicity of these in relation to one's own design research topic and research field.

Design research ethics

Existing UID course relating to this theme: Design research ethics, 5 credits

Contents
This thematic area addresses ethical considerations in design research, ranging from specific engagements and interventions to the issues entailed in exploring set-ups and situations of future research possibilities. Design has a special relationship to intervention into people's lives during the processes of design and in relation to output of design efforts. At the same time, design research does not necessarily have established ethical practices for all the various forms of intervention we may engage in, especially as notions of participation and collaboration frequently challenge notions of roles and distributions of power within a design process.

The purpose of this thematic area is for the PhD student to familiarize themselves with the ethical guidelines for research in Europe (GDPR), Sweden, Umeå University (and any other country where the own research is or has been planned to be performed), and to critically assess and reflect upon ethical issues in their own research in relation to such frameworks. To achieve, three levels, or aspects, of design research ethics will be addressed:

- Basic research frameworks: local (organizational), national, & international
- Ethics in the design of design research projects and programmes.
- Ethics in design research action and intervention, including research data management.

Expected learning outcomes
After completing the course credits, students will be able to:

Knowledge and understanding
- Account for national and international frameworks and regulations regarding research ethics, in relation to design research.

Competence and skills
- Describe and discuss ethical implications of the design of design research projects in relation to the own research practice.
- Formulate an ethical review application related to the own design research project.
- Set up a data management plan related to the own design research project.

Judgement and approach
- demonstrate ability to locate, articulate and critique ethical issues pertaining to conducting design research
- An ability to articulate and frame ethical considerations in design research with respect to methodology as well as objectives and intentions.