Faculty of Science and Technology
Umeå University, 901 87 Umeå
Telephone: 090-786 50 00

Ref. no.: FS 4.1.1-438-23

UMEÅ UNIVERSITET

General syllabus for third-cycle studies in industrial design
with a degree of doctor as the final objective

Scope: 240 credits
Degree: Degree of doctor
Level: Third-cycle level
Established: Programme syllabus established by the Faculty Board of the Faculty of Science and Technology on 5 September 2023

Valid from: 5 September 2023
Body responsible: Faculty of Science and Technology

1. Subject description and delimitation

Industrial design is about how products, environments, services and systems come into being, with a focus on the processes and contexts that create, plan, determine and shape them. Industrial design has in many respects undergone significant changes over time. However, there is still a basic orientation towards outcomes that are intended to be serially produced or scaled up, thereby in one way or another reaching a broader group of people. The conditions for individual depth created within the doctoral education are thus situated in an oftentimes interdisciplinary design methodology (rather than personal artistic expression), and in new possibilities such as emerging technologies and contemporary social issues (rather than in-depth knowledge of a specific form of production or a certain material). The education is as a whole characterised by fundamental questions regarding relationships between design and use, and between the individual and society, with a foundation in a Scandinavian design tradition. From this follows that the subject area of design also incorporates a broader understanding of the historical as well as the contemporary and possible future contexts that create the conditions we work with and within, particularly social, cultural and knowledge-based approaches to the people, environments and contexts that we design in, with and for.

2. The objectives of the education

2.1 Description of education at the level in question

The education is at third-cycle level. The objectives for third-cycle studies can be found in Chapter 1, § 9a of the Swedish Higher Education Act.

2.2 National objectives for the degree in question

The national objectives for the degree can be found in Annex 2 of the Swedish Higher Education Ordinance.

The objectives for Doctor of Industrial Design studies are defined by the Swedish Higher Education Ordinance, Chapter 6, §§ 4 and 5 (see appendix), in which the terms *research field* and *limited area of the research field* are interpreted as industrial design in the sense above, and as the doctoral student's specialisation within this subject.

The objectives of the Swedish Higher Education Ordinance are supplemented by a gender equality and equal conditions perspective, which is integrated into the content and design of the education, and gives the doctoral student an insight into how the perpetuation of inequalities through traditional structures can be counteracted.

3. Eligibility requirements

General eligibility requirements

In order to be accepted for third-cycle studies, the applicant must meet the general eligibility requirements by completing a second-cycle degree or course requirements totalling at least 240 credits, of which at least 60 credits must be at second-cycle level, or equivalent foreign education, or equivalent qualifications.

Specific eligibility requirements

In order to meet the specific eligibility requirements to be accepted for third-cycle studies in industrial design, the applicant must have at least 90 credits within the field of design or other relevant subjects, of which at least 30 credits must be at second-cycle level. Anyone who has acquired essentially equivalent knowledge in some other way, either in Sweden or abroad, also meets the specific eligibility requirements.

4. Selection

The selection of applicants who meet the eligibility requirements shall take into account their ability to assimilate the doctoral education, and shall be based on the following assessment criteria:

- personal suitability
- previous study results
- the quality of the submitted description of the intended thesis project, related – where applicable – to the relevant research institution's research profiles and programmes
- the quality of the material attached to the application, where applicable (e.g. design portfolio, previous publications), and
- other qualifications

The fact alone that an applicant's previous education or professional experience is assessed as possible to accredit within the education may not

give the applicant priority over other applicants in the selection (Swedish Higher Education Ordinance Chapter 7, § 41).

Decisions on admission for third-cycle studies with a degree of doctor as the final objective are made in accordance with Umeå University's delegation of authority.

5. Content and structure

5.1 General

The studies shall comprise 240 credits for the degree of doctor. Third-cycle studies leading to a degree of doctor comprise four years of net study time, and consist of a course element of 70–100 credits and a doctoral thesis comprising 140–170 credits.

A doctoral student who has been accepted for third-cycle studies leading to a doctoral degree may, if they wish, complete a degree of licentiate as a milestone objective.

5.2 Content

The education has a strong international dimension. Doctoral students take part in international collaborations, and are expected to present their research findings in international contexts.

The content of the education consists of a course element and the thesis work. The course element consists of compulsory courses that are common to all doctoral students within the subject and a varying number of additional courses that are decided on individually in accordance with each doctoral student's needs. The compulsory courses provide breadth and depth within the subject area of design and its research methodology, and introduce and address generic competences. The annual review of the doctoral student's individual study plan ensures an appropriate selection of courses and other activities in order to achieve the national and local objectives for third-cycle studies.

The education includes compulsory courses totalling 41 credits, participation in a research seminar worth 8 credits, and 22–52 credits of elective courses.

5.2.1 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 courses and other courses. Taking into account the doctoral student's prior knowledge, research specialisation and interests, the course element is designed in consultation between the supervisors and the doctoral student, and is entered into the individual study plan.

The *compulsory courses* can be divided into three groups: subject-specific courses, faculty-wide courses and participation in the department's research seminar. The compulsory courses can be completed either through participation in courses organised by the department and the Faculty of Science and Technology, or through the doctoral student – in accordance with the supervisor's assessment – acquiring essentially equivalent knowledge in some other way, either in Sweden or abroad. The courses offered at the Faculty and the department will vary over time.

Subject-specific courses consist of courses that provide 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 courses are connected to the local objectives for the education, and should include a combination of courses which is balanced in terms of credits, within the following areas:

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

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

- 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 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.

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

Examination
For courses at third-cycle level, oral and written examinations apply in accordance with the course syllabus and the examiner's instructions. Examinations are graded as pass or fail. The grade shall be decided on by a specially appointed member of teaching staff (the examiner).

5.2.2 Doctoral thesis

The doctoral thesis comprises 140–170 credits. It can take the form of either a single, coherent scientific work (a monograph thesis) or a compilation of scientific articles with an introduction, a summary and a discussion (a compilation thesis).

The thesis work and its results shall be continuously presented and discussed at research seminars, or shall undergo equivalent review arranged by the department. During their study period, doctoral students shall present their research regularly at open seminars or conferences.

The following steps are compulsory for all doctoral students at Umeå Institute of Design:

- *Presentation seminar:* Held during the first term. The research outline/idea is presented.
- *Mid-way seminar:* Held when the doctoral student is approximately halfway through their studies. A first draft of the content, focus and structure of the thesis and its context, materials and methodology is presented.
- *90% seminar:* Approximately twelve months before the planned defence of the doctoral thesis. A draft of the thesis manuscript is presented, with all the included sections detailed to a sufficient degree for an external opponent to carry out an overall assessment.
- *Final review:* Approximately five to six months before the planned defence of the doctoral thesis. The completed thesis manuscript is reviewed by the examiner and either an external or an internal reviewer.

The doctoral thesis shall be written in English or Swedish. The thesis must have a detailed summary in Swedish, and may also have summaries in other languages, including national minority languages.

The doctoral thesis shall be defended orally at a public defence. It is assessed and graded as pass or fail. The assessment and grading shall take into account the content of the thesis and its defence.

6. Examination

A degree of doctor is awarded upon the doctoral student's completion of third-cycle studies worth 240 credits in design, having received a grade of pass in the examinations included in the education, and having written and defended a doctoral thesis at a public defence which has been awarded a grade of pass by the examining committee. A degree certificate will be issued upon submission of an application to the Degree Evaluation Office at the Student Services Office.

7. Other instructions

The applicable provisions on education at third-cycle level are detailed in:

- The Swedish Higher Education Ordinance: Chapter 5: Employment of doctoral students, Chapter 6: Courses and study programmes, and Chapter 7: Admission to courses and study programmes, Annex 2: The System of Qualifications
- Admission regulations for doctoral studies at Umeå University
- Local system of qualifications at Umeå University
- Regulations for doctoral studies at Umeå University
- Handbook for postgraduate students at the Faculty of Science and Technology at Umeå University

National objectives for the degree (Swedish Higher Education Ordinance Chapter 6, §§ 4 and 5)

Knowledge and understanding

For a degree of doctor, the doctoral student shall

- demonstrate broad knowledge within – and a systematic understanding of – the research field, and in-depth and current specialist knowledge within a limited part of the research field, and
- demonstrate familiarity with scientific methods in general and with the specific research field's methods in particular.

Competence and skills

For a degree of doctor, the doctoral student shall

- demonstrate a capacity for scientific analysis and synthesis, and for independent critical review and assessment of new and complex phenomena, issues and situations,
- demonstrate the ability to identify and formulate issues – critically, independently, creatively and with scientific accuracy – and to plan and, using appropriate methods, carry out research and other advanced tasks within specified time limits, and to evaluate and review this work,
- with a thesis, demonstrate the ability to make a significant contribution towards the development of knowledge through their own research,
- demonstrate the ability – in both national and international contexts, both orally and in writing, and in an authoritative manner – to present and discuss research and research findings in dialogue with the scientific community and with society as a whole,

- demonstrate the ability to identify the need for additional knowledge, and
- demonstrate the conditions – both within research and education and in other advanced professional contexts – to contribute towards the development of society and to support other people's learning.

Judgement and approach

For a degree of doctor, the doctoral student shall

- demonstrate intellectual independence and scientific integrity, and the ability to make research ethics assessments, and
- demonstrate a deeper insight into the potential and limitations of science, its role in society and people's responsibility for how it is used.

For a Degree of Doctor in Industrial Design, the doctoral student shall also (local objectives):

Knowledge and understanding

- demonstrate familiarity with and a systematic understanding of the scientific, artistic and interdisciplinary approaches of the field of design in general, and of practice-based design research in particular.

Competence and skills

- demonstrate ability to use design – critically, independently, creatively and with precision – for both investigative and experimental purposes, and to present and communicate their research process and findings.

Judgement and approach

- demonstrate an in-depth insight into the possibilities, limitations, ethics and responsibilities of the field of design, including a broad understanding of its role in society from global and sustainability-related perspectives, and
- demonstrate ability to critically assess and reflect on their own research process and their role as a design researcher with regard to knowledge contributions to the field of design.