

Study plan for graduate education in the subject

## **HISTORY OF SCIENCE, TECHNOLOGY AND ENVIRONMENT HISTORISKA STUDIER AV TEKNIK, VETENSKAP OCH MILJÖ**

School of Architecture and the Built Environment, KTH  
(replaces study plan for graduate education in the subject HISTORY OF TECHNOLOGY)

Part of the doctoral program

STUDIES IN THE HUMANITIES AND SOCIAL SCIENCES OF TECHNOLOGY, SCIENCE, AND THE ENVIRONMENT  
HUMANISTISKA OCH SAMHÄLLSVETENSKAPLIGA STUDIER AV TEKNIK, VETENSKAP OCH MILJÖ

Common regulations and guidelines for graduate education at KTH are formulated in the institution's overall regulations (<http://intra.kth.se/regelverk/utbildning-forskning/forskarutbildning>, February 5, 2010). This study plan for graduate education in history of science, technology and environment supplements the common regulations and guidelines with instructions specific to the subject.

### **1. Subject Description and Aim of Education**

Graduate education in the subject of history of science, technology and environment addresses processes of scientific, technological and environmental change from a historical perspective. A focus is placed on the exploration of the societal structures and cultural ideas motivating these processes of change. Another focus lies on studying their social and cultural consequences. The subject encompasses both humanities and social science approaches.

Graduate education within history of science, technology and environment will supply students with a comprehensive overview over current state-of-the-art scholarship in this research environment as well as a thorough theoretical and methodological training. The education's primary aim is to provide the grounds to continue independent academic research work within the academic field.

### **2. Current Research**

Historical studies of science, technology and environment encompass a broad historical subject that contains elements from several neighboring humanities and social sciences disciplines. At the division of history of science, technology and environment we carry out research in the history of technology, history of science, environmental history and industrial heritage studies. The graduate education opens the possibility for in-depth studies within these fields.

### **3. The Structure of Education**

Graduate education consists of courses, seminars and thesis work. Courses may consist of lectures, literature studies and methodology, and they include active participation in workshops and conferences. Courses can be taken at KTH or in cooperation with other research institutions in Sweden and abroad.

Graduate education is carried out under the guidance of a main supervisor, generally together with one or more assistant supervisors and in accordance with an individual study plan approved by the director of graduate studies. The graduate student's individual study plan is adapted to the requirements and the focus of the PhD thesis. The graduate student's progress will be assessed at least once a year together with the revision of the individual study plan, which will be carried out by the student and the main supervisor.

The graduate student will actively participate in the division's higher seminar. The individual thesis project is to be presented regularly at these seminars. Furthermore the student is expected to participate in other seminar activities of relevance to the thesis work within and outside of the division. The graduate student will also participate in national and international conferences within the academic field.

## 4. Obligatory and Recommended Courses

The licentiate degree consists of coursework worth 45 credit points (cp) and thesis work worth 75 cp, adding up to 120 cp. The doctorate degree consists of coursework worth 90 cp and thesis work worth 150 cp, which add up to 240 cp.

The coursework for both the licentiate and doctorate degree consists of obligatory and elective courses. The electives are chosen in consultation with the main supervisor and listed in the individual study plan. They are designed to provide extended knowledge mainly in connection with the thesis work. The courses will be taken in accordance with the agreements between the student and the main supervisor made in the individual study plan.

### Obligatory Courses

The obligatory courses to be taken correspond to 30 cp for the licentiate degree and 45 cp for the doctorate. The obligatory courses and their course credits are the following:

Theory and Method in Historical Research, Part 1 (F1N5505) (required for the licentiate)	7,5 cp
Theory and Method in Historical Research, Part 2 (F1N5506)	7,5 cp
Perspectives on Technology, Science and Environment in Space and Time (FAK3101) (required for the licentiate)	15 cp
Introduction to the Research Process (F1N5503) (required for the licentiate)	7,5 cp
Research Communication (F1N5504)	7,5 cp

For graduate students who intend to teach as part of their research the completion of a pedagogical course of at least 3 cp is required. The course is also recommended to those students who do not teach.

### Elective Courses

Apart from the obligatory courses the graduate students will attend elective graduate level courses at the division or other institutions, or individual literature study courses, which will be designed in cooperation with the main supervisor.

Courses within the following academic fields are recommended to graduate students in history of science, technology and environment:

- Industrial Heritage Studies
- Environmental History
- History of Science
- History of Ideas
- Economic History
- Ethnology/Anthropology
- Science and Technology Studies (STS)
- Epistemology/Theory of Science
- Gender Studies

After agreement with the main supervisor and approval of the division's admission board the individual study plan can allow for the accreditation of points from courses taken on the undergraduate level worth 15 cp maximum. Courses on the undergraduate level will only be counted if they concern academic subjects that are relevant for the graduate education and that at the same time are not part of the prerequisites.

## 5. Thesis

The thesis work is designed for the research student to develop the ability to contribute independently to academic research and the ability of academic cooperation within and outside of the own research subject. The thesis must therefore rest on independent research. The student's contribution to articles of multiple authors must be distinguishable if these articles are to be included in the thesis.

The thesis can be composed either as a compilation of academic articles or as a monograph. In the former case a specially written summary needs to be added. Regardless of whether the thesis is composed a monograph or as a compilation the student is expected to strive for high-quality international publications during the period of graduate studies. Generally the thesis will be composed in English.

Regardless of being submitted as a monograph or a compilation of academic articles the thesis must be of such quality that it can be assessed as forming the basis of at least two (for a licentiate), respectively at least four (for a doctorate) normal articles that could be published in internationally recognized and peer reviewed journals.

## 6. Eligibility and Selection

### 6.1 General and Specific Requirements and Prerequisites

Eligible to be admitted to graduate education in history of science, technology and environment are those who have passed a basic university education of at least 240 cp or have acquired equivalent knowledge as well as documented abilities of composing a longer essay within the subject environment.

Graduate students are expected to be capable to read and write academic English as well as able to speak English fluently.

### 6.2 Rules for Selection

The head of the School of Architecture and the Built Environment decides on admission to research studies after the preparation by the program board for history of science, technology and environment and the prospective main supervisor.

In addition to the applicant being formally eligible the basis for selection will be the ability to independent review and critical analysis as well as the prerequisites to carry out the research training with good results and within the specific time. Study results from courses of in-depth character taken in undergraduate training as well as from independently carried out academic work will be of major interest for this assessment.

## 7. Examinations and Assessments in Education

### 7.1 Licentiate and Doctorate Examination

The licentiate examination consists of course work of 45 cp and thesis work of 75 cp. The thesis will be submitted and defended in accordance with KTH regulations.

The doctorate examination consists of course work of 90 cp and thesis work of 150 cp. The thesis will be submitted and defended in accordance with KTH regulations. The courses and thesis credited in the licentiate exam may also be counted for the doctorate exam.

### 7.2 Assessment included in the Program

Part of the research training courses is written evidence of academic abilities. In certain cases the written assessment can be replaced by an oral examination. In any case the examination will be designed so as to convince the examiner that the student has grasped the full course content.