Curriculum Statement for Graduate Level (Third-level) Education

Meteorology

Swedish title: Meteorologi

TNMETE00

Swedish Curriculum adopted by the Board of the Faculty of Science and Technology (Board for Third-level Education) on 2008-07-02, revisions on 2012-08-28, 2016-10-05.

The Curriculum Statement for Third-level Education consists of three parts: a general part, this subject-specialised curriculum statement, and each doctoral student's individual study plan.

Objective

The third-level education shall provide skill in the front line of research within the discipline/specialisation based on first- and second-level education in the discipline. The doctoral student shall achieve a considerable theoretical disciplinary skill and a substantial practical skill in the disciplinary methodology through active participation in courses and accomplishment of thesis work under supervision. The education shall, in addition, lead to active participation by the doctoral student in the scientific discussion.

The doctoral student shall also be able to present her/his own goals and results orally and in writing to different target groups in English and, in the case of Swedish-speaking doctoral students, in Swedish.

A person who received a doctoral degree shall independently be able to plan and carry out a research project within the discipline/specialisation. The PhD shall be capable to take responsibility for research and development work both in academia and in commercial and industrial life. A person who received a Swedish licentiate degree shall have experience of independent research work and have reached the disciplinary and methodological skill required to take active part in research projects within the discipline. He/she shall, furthermore, be capable to react critically to the scientific development in the discipline.
Subject description

Meteorology. TNMETE00. The meteorology discipline comprises studies of physical and chemical processes in the atmosphere. The disciplinary research at Uppsala University is primarily focused on processes in the atmospheric boundary layer both over land and sea, as well as on meso-scale meteorology. Applications such as dispersion of air pollution, wind energy, and sound propagation are also part of the discipline. Information about current research areas can be seen at http://www.geo.uu.se/.

Eligibility

Basic Eligibility

The basic eligibility for third level education is described in the general part of the curriculum statement.

Special Eligibility

A person has special eligibility for a third-level programme if she/he has passed examination in courses within the discipline/specialisation or in courses of areas of relevance for the discipline/specialisation ranging a minimum of 90 higher education credits, or if he/she has acquired equivalent knowledge in some other way (e.g., abroad). Examples of second-level educations that provide special eligibility in meteorology are the Master Programme in Physics with specialisation in Meteorology as well as the Aquatic and Environmental Engineering Programme. A person who wants to be admitted to third-level education and does not fulfil the requirements for special eligibility can invoke this as a reason for priority when applying for complementary education.

Admission

Applicants for a third-level programme in Meteorology must submit an application to the head of the Department of Earth Sciences. Admissions to places in third-level programmes normally take place two times per year.

In connection with the admission it must be stated how it is planned to finance both the personal maintenance of the doctoral student, and her/his research.

Programme structure

In connection with the admission, each doctoral student and her/his supervisor shall draw up an individual study plan after consultation with the professor in charge of the third-level programme. The plan is to be approved by the head of the department (by delegation of the
Faculty Board), in connection with the admission.

The individual study plan shall be reviewed jointly by the doctoral student and her/his supervisor, annually, and be provided with a summary of the achieved results and the plans for the coming year. Significant changes and any disagreement on the individual study plan shall be reported to the head of the department or, if deemed necessary, to the Board for Third-level Education.

The research studies starts with an introductory essay counted as 15 higher education credits.

Courses
Within the third-level programme there may be different kinds of courses, such as lectures, literature studies, practical training, field studies, etc. The courses are intended to provide wider insights into the subject as a complement to the specialist competence acquired in the research work. The courses included in the individual study plan may preferably be selected outside of the department where the selection of courses is limited. The provision of courses is constantly revised.

A course in research ethics (of at least 2 higher education credits) is mandatory for licentiate and doctoral degree, as well as university educational theory for doctoral students who teach at basic or advanced level.

Lower-level courses can in certain cases be credited as third-level courses. Such courses are normally evaluated to half their lower-level credits. Examples of courses given more or less regularly at the Programme of Air, Water and Landscape Science:

- Energy exchange at the surface of the earth
- Experimental Boundary Layer Meteorology
- Basic turbulence theory

Other courses can also be offered – see the Programme of Air, Water and Landscape Science (http://www.geo.uu.se/luval/) for information.

Requirements for a doctoral degree
The requirements for a doctoral degree consist of on one hand passed examinations in the courses included in the approved individual study plan of each doctoral student, and on the other hand a passed public defence of the doctoral thesis. The program leading to the doctoral degree amounts to 240 higher education credits (four years of full-time studies), of which the thesis part amounts to a minimum of 120 higher education credits and the course part to a minimum of 60 higher education credits.
Requirements for a licentiate degree

A stage of at least 120 higher education credits (two years of full-time studies) in the third-level programme may be completed with a licentiate degree. The requirements for this are that the doctoral student both has passed the examinations included in the programme stage and has got an academic paper amounting to a minimum of 60 higher education credits passed. The course part amounts to a minimum of 30 higher education credits.

Other

The third-level education is primarily aimed at giving qualifications for a continued research career. In addition to this it is desirable for the PhD student to acquire pedagogical skills during the study time. An active participation in information and communication activities (the so-called “third task” in Swedish university legislation) is also seen as positive.

It is desirable that the PhD student, in connection to the dissertation, writes a popular-scientific article in Swedish and/or her/his mother tongue that summarises the PhD thesis.