Translation of Curriculum Statement for Graduate Level (Third-level) Education

Earth Science with specialization in Historical Geology and Palaeontology

Swedish title: Geovetenskap med inriktning mot historisk geologi och paleontologi

TNGEVE03

Swedish Curriculum adopted by the Board of the Faculty of Science and Technology (Board for Third-level Education) on 2008-07-02. Translation approved on 2010-09-03.

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

Objective

On the basis of the undergraduate level curriculum within the subject area, the graduate (Third-level) curriculum will give additional insight into the subject's central areas, together with increased knowledge within at least one field. The doctoral student shall be given the opportunity to undertake critical and independent research studies within the subject area, or for other professional activities with similar requirements, through supervision and thesis work.

The doctoral student shall also be able to present his/her 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.

Subject description

Historical Geology and Palaeontology is the study of the Earth's 4 500 000 000 years old geological and biological development. This subject area lies on the boundary between geology and biology and includes a wide spectrum of methods of research where the dimension of time is of special significance. Examples of work fields within the study area include, amongst others, the early diversification of single-celled organisms (protokaryotes and eukaryotes) and their ecology during the Proterozoic, research into Precambrian photosynthetic micro-
organisms with organic cell walls, the systematics of Cambrian autotrophic micro-organisms and their role in the development of ecosystems during the Cambrian explosion, comparison of fossil and present-day biomarkers, the early evolution of the Metazoa with special emphasis on the Cambrian explosion, exceptional preservation, the Ordovician diversification of life, functional morphology of living and extinct animals, comparison of data from fossils with evolutionary theories based on data from present-day organisms, and the boundary interaction between palaeobiology and evolutionary developmental biology.

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 program in Earth Science with specialization in Historical Geology and Palaeontology if he/she has passed examinations in courses in Earth Science or courses within areas relevant for Historical Geology and Palaeontology comprising at least 90 higher education credits (including an individual study course of at least 15 higher education credits), or has otherwise acquired the equivalent knowledge.

Admission
Applicants for Third-level program in Earth Science with specialization in Historical Geology and Palaeontology must submit an application to the head of the Department of Earth Sciences. Admissions to places in Third-level programs take place normally three 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.

Program structure
In connection with the admission, each doctoral student and his/her supervisor shall draw up an individual study plan after consultation with the professor in charge of the third level program. The plan must 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 his/her 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.

Courses

Within the Third-level program 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 be selected partly from among specific doctoral courses, through summer school or equivalent courses, or as individual literature courses. The choice of courses within the host department is limited and doctoral students can choose relevant courses from other departments or even with other places of learning.

Courses at a lower level may be approved in cases where deeper studies are desirable within an area that lies outside of the specific research area. The inclusion of these courses must be approved by the supervisor.

The range of courses offered is revised continuously.

Depending on the specialization, it may be desirable that a significant part of the courses in the individual study plan are to be selected from the biological area.

Requirements for doctoral degree

The requirements for the doctoral degree consist of passed examinations in the courses included in the approved individual study plan of each doctoral student, on the one hand, and, on the other hand, a pass mark for the public defense 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 40 higher education credits.
Requirements for licentiate degree

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

Other

Research in Historical Geology and Palaeontology is carried out within a comprehensive international framework of co-operation and assumes an extensive information flow. It is necessary that doctoral students can assimilate biological and palaeontological texts in English.