



Programme description

Ref No: V-2022-0363 3.2.3

Doctoral programme

Adopted: 23/08/2022

Revised:

Programme description: Doctoral Programme in Chemical Science and Engineering

Name of the programme in Swedish and in English

Also indicate whether the programme has specialisations. If so, give their names in Swedish and English.

Kemivetenskap / Chemical Science and Engineering

State which third-cycle subjects are included in the programme.

The programme has three third-cycle subjects:

Chemistry

Chemical engineering

Fibre and polymer science

Programme organisation

Describe the Programme Council (state which functions are included, not individuals), programme director and, in particular, how student representation is ensured.

The programme is led by the programme director (PA), who is part of the School's Quality Council for Third-Cycle Education together with the other PAs of the School, the director of third-cycle education (FA), all vice directors of third-cycle education (vice FAs), teacher and supervisor representatives, representatives from the School's PhD Student Council, and all administrators who are part of the School's administration for doctoral studies. The PA leads the Doctoral Programme Council.

Courses

Range of courses offered

Describe the range of courses offered in the programme and what subject areas are covered. State how often each course is offered.

The School offers third-cycle courses and learning activities in the different disciplines of the subject. The course component of third-cycle education is largely tailored to the knowledge needs and specific research project of the individual doctoral student. Third-cycle courses are intended to provide both depth and breadth in areas central to the programme. These courses may be supplemented to a limited number of credits with courses at the first, second, and third-cycle level both within and outside of KTH.

The programme offers courses and other learning activities aimed at the fulfilment of the qualitative targets of the degree. Furthermore, as a recommended learning activity, doctoral students are encouraged to actively participate in scientific exchange with academia, companies, and the wider society by communicating and presenting their own research results in various ways. Further information on compulsory and recommended activities can be found in the general syllabus of the respective third-cycle subject.

Quality assurance and monitoring of programme courses

State how the programme's courses are monitored and how quality assurance of the courses is carried out.

In accordance with KTH's regulations, regular review of third-cycle courses within the programme is conducted through course evaluations and course analyses. In consultation with the Programme Council, the PA/vice FA is responsible for ensuring that course syllabus comply with KTH's regulations, that new courses are created when necessary, that courses that are no longer offered are regulations is communicated to the course coordinators.

Other programme content and support for the programme's doctoral students

Organised activities other than courses, e.g. seminar series and workshops.

The individual study plan is an important tool for monitoring doctoral student progression towards their qualitative targets and learning outcomes. All individual study plans are available in an electronic support system (eISP system) linked to Ladok, in which the PA/vice FA/FA has access to information for regular monitoring of research student activities and how these enable progression towards the qualitative targets. The supervisors and doctoral students are responsible for updating the individual study plan when necessary, but at least once in every 12 month period.

Progression towards the qualitative objectives is also evaluated through a compulsory half-time review in the form of an open half-time seminar with independent reviewers, followed by a meeting to discuss the student's progress and further pathway towards the qualitative targets.

Description of the continuous, systematic quality management of the programme

Describe the regular follow-up, analysis, evaluation and development work. This can be done e.g. through course analyses, programme analyses, how a relevant range of courses is ensured.

Third-cycle education, which includes analysis of the doctoral programme, undergoes an annual quality review in which the content of the education and the follow-up of quality assurance measures are evaluated and discussed. Within the context of quality assurance, particular attention is paid to the environment, resources, quality, design, implementation, and outcomes of the third-cycle education, as well as the follow-up of measures and feedback proposed to the parties concerned. In addition, third-cycle education pays great attention to the perspective of the doctoral students, as well as to issues related to sustainable development, equality, diversity, equal treatment, inclusivity, and working life.

Examples of concrete quality assurance measures:

- Qualitative targets for third-cycle education are clearly described in the subject's syllabus and the student's individual study plan. Progression towards qualitative targets is regularly monitored through, *inter alia*, follow-up of individual study plans and compulsory half-time review. The compulsory learning activities are an important support mechanism for target achievement.
- The Doctoral Programme Council for the Doctoral Programme in Chemical Science and Engineering meets regularly during the semester. The Council is chaired by the PA. Council members include representatives of teachers, supervisors, the PhD Student Council, and University Administration. The Programme Council is advisory to the PA and addresses current issues related to programme implementation and quality development.

- The Quality Council for Third-Cycle Education meets regularly during the semester. The Council represents the entire School and is chaired by the FA. Council members include all vice FAs and PAs, and representatives of teachers, supervisors, the PhD Student Council and University Administration. The Quality Council is advisory to the FA and head of school, and addresses issues related to all third-cycle education at the School.
- To hold the role of principal supervisor, an individual must at least have the qualifications required for appointment as a Docent and have completed relevant studies in higher education pedagogy or equivalent. For further rules related to the role of principal supervisor, see KTH's regulations.
- The PA regularly organises supervisor seminars/workshops for information and discussion on current third-cycle education issues.
- The School offers and follows up on professional development for supervisors.
- Doctoral students and supervisors are encouraged to engage in interdisciplinary collaborations and to participate in international collaborations that include short stays abroad.
- The quality of the thesis is ensured through internal review, as well as by an independent grading committee when examining doctoral and licentiate theses.
- Admission of a doctoral student must be preceded by the establishment of a study place through the Green Light process, where all available educational resources are reviewed. Establishment of a study place is required for all forms of education funding (employment as doctoral student, scholarship-funded studies, externally employed doctoral student, etc.).