

## GOVERNING DOCUMENT

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## General syllabus for the doctoral programme in the subject of:

### CHEMISTRY

Valid as of 1 January 2013

Department to which the syllabus applies  
CHEMISTRY AND BIOTECHNOLOGY

Subject code  
NLKEMI00

The goals and design of the programme may vary between departments (see 4. Miscellaneous)

#### *Regulations for third-cycle (doctoral) education at SLU*

These can be found in the [Guidelines for third-cycle \(doctoral\) education](#) (reg. no SLU ua Fe.2012.40-3218) and [Admission regulations for third-cycle \(doctoral\) education at SLU](#) (reg. no. SLU ua Fe.2012.4.4-3467). These governing documents lay out rules and recommendations for *entry requirements, recruitment and admission, joint programmes leading to a double or joint degree, scope and content of the programme, planning and follow-up of the programme, procedure when a course or study programme is unsatisfactory, examination and degrees.*

General study plans for subjects within the doctoral studies can provide additional, subject-specific rules in addition to these joint rules. This document specifies the subject-specific rules for the subject chemistry. In other respects the third-cycle studies in this subject shall adhere to the Guidelines for third-cycle education and the Admission regulations for third-cycle education at the Swedish University of Agricultural Sciences.

#### *1. Purpose and objectives*

The goal is for the doctoral student, after completing their studies, to be familiar with the general tools of science as well as the research methods typical for the subject field of chemistry, i.e. contemporary concepts in inorganic, physical and organic chemistry, respectively, and the theoretical foundations for determining the

structure and properties of inorganic, organometallic and organic compounds, along with research methods used for this purpose. The purpose is to meet the qualitative targets for third-cycle studies specified in the Higher Education Ordinance, Annex 2 – Qualifications ordinance.

## *2. Entry requirements*

Those admitted shall meet the following specific entry requirements.

The specific entry requirements for chemistry are normally knowledge corresponding to at least first-cycle level studies in chemistry (general, analytical, inorganic and physical chemistry as well as biochemistry and organic chemistry) of at least 60 credits and subject-specific studies at a second-cycle level of at least 30 credits.

## *3. Scope and content of the programme*

The programme contains two main elements: research and coursework.

### Research

While studying, the student shall conduct independent research work which is presented in a doctoral thesis corresponding to 180 credits. The thesis can be presented as a monograph or as a compilation thesis, of which the latter is the standard. Compilation theses are expected to include at least four works. All works must be of such a quality that they can be published and at least two, with the doctoral student as lead author, shall be accepted and/or published in well-regarded journals with referee systems. The thesis should be written in English.

For the licentiate seminar, scientific work corresponding to at least 90 higher education credits is required. At least 2 works are expected to be included in the thesis. The composite papers must be of such quality that they are eligible for publication. The thesis should be written in English.

### Courses

The student is required to undertake coursework which corresponds to at least **60** credits for a Degree of Doctor, and at least **30** credits for a Degree of Licentiate. These studies shall include suitable general courses as well as individually selected subject courses.

Subject courses should include 45 credits for a doctoral degree and include an advanced general subject course (advanced inorganic chemistry or advanced organic chemistry) of at least 15 credits. Of the subject courses, at least 20 credits should consist of research methodology courses offered by the Department of Chemistry at SLU (EXAFS spectroscopy, practical X-ray crystallography, NMR, mass spectrometry, chromatography) or at another university.

#### *4. Miscellaneous*

Further information about third-cycle studies is available in SFS 2006:1053, and information about grants can be found in SFS 1995:938 as amended by 1998:81 (reprint), 1998:161 and 2006:1053. Information about third-cycle studies at SLU is available in the Admission regulations for third-cycle (doctoral) education (reg. no SLU ua 41-1482/07) with the annex to the Board's decision of 26 April 2007, reg. no SLU ua 41-1482/07, the Vice-Chancellor's decision and the guidelines for doctoral education at the Faculty of Natural Resources and Agricultural Science (reg. no SLU ua 40-1244/08). Each department to which the third-cycle subject area is linked can choose to specify requirements in addition to those in this study plan. These requirements are to be specified in an annex.

#### *5. Annexes*

There are no annexes.