

# **GENERAL STUDY PLAN FOR RESEARCH EDUCATION (THIRD LEVEL HIGHER EDUCATION) IN FOOD SCIENCE at the Faculty of Natural Resources and Agricultural Sciences at SLU**

## **1. Objective and purpose of the programme**

The objective of the programme is to familiarise research students with general scientific tools, as well as the research methods that are typical of food science. Third level education is to provide the student with knowledge beyond basic education, as well as greater depth in food science or in one of the specialisations of meat science, food chemistry, dairy products or plant products. The purpose is to meet the qualifications for research education specified by Chapter 6, Sections 4-5 of the Higher Education Ordinance (HEO).

Students are also to acquire knowledge about, and an attitude to, ethical issues associated with research in the subject. In addition, students are to obtain education in, and experience of, pedagogy and research information.

Research education can lead to both a degree of Licentiate and a degree of Doctor. The degree of Licentiate can be credited toward continuing studies for a degree of Doctor.

## **2. Eligibility**

People are eligible for admission to research education who have taken a second level (Master level) qualification and meet the requirements for basic eligibility (Chapter 7, Section 39 of HEO (2006:1053)), i.e., at least 240 higher education credits, including 60 credits at the second level (Master level) or acquired essentially the same knowledge in some other way, either in Sweden or abroad. The Faculty Board may exempt an individual applicant from the requirement for basic eligibility if special grounds exist. In such cases, SLU demands that the applicant has taken a first level (Bachelor level) qualification and presents a written account of an independent project the scope of which is equivalent to 15 higher education credits and the content of which corresponds to the knowledge and skills required for a degree project toward a degree of Master, or a relevant independent project of similar difficulty and extent. The project should be written in English.

Those who are admitted must also meet the special eligibility requirements adopted for the subject (Chapter 7, Section 40 of HEO (2006:1053)).

Special eligibility in the subject of food science normally requires knowledge equivalent to general chemical/biological basic education, including at least 30 higher education credits in food science subjects or a corresponding background that is suitable for the project.

### **3. Selection and admission**

Applicants are to be selected on the basis of their ability to benefit from the research education programme (Chapter 7, Section 41 of HEO (2006:1053)). The head of the department to which the applicant wishes to be admitted as a research student proposes admission to the Faculty Board. The board makes admissions decisions.

A review by the department's research education committee precedes each proposed admission by the head of the department. The members of the committee must receive the candidate's individual study plan, project plan, CV/study background and financing information no later than one week before the session. The contemplated principal supervisor is to attend the session to present the matter and answer questions. The review considers the department's ability to provide supervision and basic resources for implementation of research education.

### **4. Scope, content and organisation**

#### ***4.1 Scope***

The programme for a degree of Doctor consists of four years of full-time studies (240 higher education credits). Two years of full-time studies (120 higher education credits) are required for a degree of Licentiate.

#### ***4.2 Content***

The programme contains two primary components: a scientific project and course-related studies.

##### *Scientific project*

During the period of education, the research student shall conduct an independent research project that represents at least 180 higher education credits for a degree of Doctor and at least 90 higher education credits for a degree of Licentiate. The project shall be of significance for food science research. The thesis is generally a summary of previously published articles or manuscripts that may have been produced in collaboration with other researchers or research students. The quality of the papers shall be such that they are deemed to meet reasonable requirements for publication in good scientific journals. While the number of papers may vary, four is the specified target. The thesis should be written in English to ensure the widest possible dissemination of the research results. Seminars, workshops, conferences, field trips, etc., are also integral to the thesis project.

If the papers of the thesis have multiple authors, the contribution of the research student must be clearly specified in the thesis.

##### *Coursework*

The coursework shall consist of 45-60 higher education credits for a degree of Doctor and 25-30 higher education credits for a degree of Licentiate. Coursework shall include suitable basic courses (approximately 1/3 of the course credits), as well as individually selected courses on special subjects (approximately 2/3 of the course credits). The courses on special subjects shall be relevant to the specialisation (meat science, food chemistry, dairy products or plant products) when applicable, as well as provide greater depth and/or breadth in the subject.

### **4.3 Organisation**

The individual study plan (Chapter 6, Section 36 of HEO (2006:1053)) for research education is drawn up in consultation between the research student and supervisor/supervisor group during the application process for admission. The faculty's guidelines for research education specify what should appear in the individual study plan. Evaluation and any modifications of the plan are to be on an annual basis. The research student and supervisor shall attest in writing that they have read the plan and any modifications to it. The study plan signed by the research student and supervisor is subsequently ratified in writing by the head of the department.

Evaluations shall be performed when 50% and 75% of the net period of studies has been used. Special emphasis will be put on the follow-up when 50% of the net period of studies has been used, when the research student will give a half-time seminar on his/her research project. An evaluation committee comprising the supervisor group, the person responsible for the research education at the department and/or the head of the department and possibly an external evaluator will evaluate the studies of the research student, based on the half-time seminar, the discussion afterwards, and the recently revised individual study plan. The supervisor group, the person responsible for research education at the department and/or the head of the department shall make an overall assessment of whether the progress, content and further plans of the studies are sufficient and realistic for the planned examination. Minutes shall be taken the half-time revision and be filed at the department with the latest version of the individual study plan as appendix. A template for minutes is found at SLU's web page for research education. At the follow-up when 75% of the net period of studies has been used, the supervisor group, the research student and the person responsible for research education at the department or the head of the department shall attend.

## **5. Examination**

A doctoral thesis must be defended orally in public and assessed by a grading committee consisting of three or five members appointed by the Faculty Board. A licentiate thesis is to be defended orally at a public seminar and approved by a grading committee appointed by the Faculty Board. The grading committee consists of three members.

The faculty's guidelines for research education specify the provisions that apply to the examination of doctoral theses and licentiate theses at the Faculty of Natural Resources and Agricultural Sciences.

The degrees of Doctor and Licentiate require that the student receives a grade of Pass on examinations and the thesis.

## **6. Supervision**

Anyone admitted as a research student is entitled to supervision throughout the period of study, i.e., full-time studies toward a degree of Doctor for four years. Each student is assigned at least two supervisors, one of whom is the principal supervisor (Chapter 6, Section 31 of HEO (2006:1053)). Without a decision having been made in each individual case, the

principal supervisor must have documented qualifications as a docent and hold a position at SLU. At least one of the assistant supervisors must hold a position at SLU.

The supervisor group consists of the principal supervisor and one or more assistant supervisors. The supervisors assist the research student on both practical and theoretical issues, while continually monitoring the progress of studies in cooperation with the student. The supervisors are also to help the student select literature and courses. The student must keep the supervisors up to date about the progress of studies so that corrections can be made when needed. The supervisors shall encourage the student to establish contacts at an early stage with researchers in the same area, both in and outside of Sweden.

## **7. Additional information**

Additional information about research education appears in Swedish Code of Statutes 2006:1053, including information about study grants in 1995:938 with amendments 1998:81 (reprint), as well as 1998:161 and 2006:1053. Information about research education at SLU appears in Guidelines for research education (third level programmes) in the Faculty of Natural Resources and Agricultural Sciences (Reg. no. SLU ua 40-1244/08).