

# General syllabus for third-cycle/doctoral education in the subject of Medical Science

(Ref no. 3-749/2013)

As of 1 July 2013.



**Karolinska  
Institutet**

## General syllabus for third cycle/doctoral education<sup>1</sup> in the subject of Medical Science

The Swedish version was established by the Board of Doctoral Education, 9 April 2013 (ref. 3-749/2013)<sup>2</sup>. The syllabus applies from 1 July 2013.

Doctoral students shall complete their doctoral education in accordance with the course demands specified in the general syllabus for the subject to which the doctoral student has been admitted<sup>3</sup>.

An individual study plan shall be established for each doctoral student.

### Eligibility, Selection and Admission

#### General Entry Requirements

General entry requirements for doctoral education are specified in the Higher Education Ordinance, Chapter 7, Section 39:

A person meets the general entry requirements for doctoral education if he or she:

1. has been awarded a second-cycle qualification
2. has satisfied the requirements for courses comprising at least 240 credits of which at least 60 credits were awarded in the second-cycle, or
3. has acquired substantially equivalent knowledge in some other way in Sweden or abroad.

The higher education institution may permit an exemption from the general entry requirements for an individual applicant, if there are special grounds.

Special provisional regulations exist for applicants who have been awarded 120 credits (180 higher education credits) or the equivalent before 1 July 2007<sup>4</sup>.

#### Specific Entry Requirements

On 1 January 2014, proficiency in English language is added as a specific requirement. See *Admissions procedures for doctoral education* and *Rules for doctoral education* (ref. 1-133/2013) for details.

Evaluation of general and specific entry requirements shall be conducted before the application for admission is submitted. Read more in *Rules for doctoral education*.

#### Selection and Admission

The selection and admission procedure regulations can be found in the *Admissions procedures* document. See *Rules for doctoral education* for a description of procedures and forms.

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<sup>1</sup> At Karolinska Institutet the term “doctoral education” is used instead of “third-cycle education”.

<sup>2</sup> This is a translation of the Swedish version. In the event of any discrepancy, the Swedish version of this document has preferential interpretation. This English version was updated 2015-09-08 when changing the translation of *poänggivande moment* from “credit-awarding elements” to “credit-bearing activity”.

<sup>3</sup> According to Higher Education Ordinance Chapter 6, section 26, a general study syllabus is required for each subject in which doctoral education is offered.

<sup>4</sup> Those that can provide evidence that they have been awarded 120 credits or equivalent before 1 July 2007 fulfil the general entry requirements for doctoral education, up to and including 30 June 2015.

## Content and arrangement of doctoral education

### Scope

For a Degree of Doctor (PhD-degree) the equivalent of four years' full-time education at doctoral level is required (240 higher education credits<sup>5</sup>) and for a Degree of Licentiate the equivalent of two years' education at doctoral level (120 higher education credits)<sup>6</sup>. Doctoral education can be conducted in parallel to clinical or other duties, however it must be possible to complete the education within four years for a Degree of Licentiate and eight years for Degree of Doctor.

### Content

To a large extent, doctoral education at KI is based on the doctoral students' individual research project, completed with specific knowledge requirements (see 'Courses and other credit-bearing activities').

### Follow-up

The doctoral students' progress shall be reviewed annually. Additionally, a half-time review, alternatively a licentiate degree, shall be conducted after the equivalent of two years' full-time study. The half-time review is more comprehensive than the annual review; see instructions for the half-time review in *Rules for doctoral education*.

### Thesis and examination

To be awarded a Degree of Doctor (PhD-degree), the doctoral student shall have successfully completed an academic thesis of at least 120 higher education credits. The thesis shall be defended at a public defence of doctoral thesis. To be awarded a Degree of Licentiate, the doctoral student shall have successfully completed an academic thesis (licentiate thesis) of at least 60 higher education credits. This thesis shall be defended at a licentiate seminar. For more information about the requirements for the degrees please see *Examensregler*, (ref. 2276/2012-500 – in Swedish).

## Courses and other credit-bearing activities

All doctoral students at KI shall achieve knowledge objectives equating to a combined **minimum of 30 higher education credits** (1.5 higher education credits equate to one week's full-time studies) for their doctoral degree, or at least 15 higher education credits for licentiate degree. These are minimum requirements; acquiring further knowledge is permitted and often required in order to meet the specified learning objectives.

Throughout doctoral education, knowledge shall be obtained and accounted for through a combination of activities, in accordance with A, B, C and D below.

### A. Compulsory introduction

Doctoral education begins with a compulsory introduction which shall, unless special grounds exist, be completed within the first year. The introductory course does not award higher education credits.

<sup>5</sup> 1.5 higher education credits are the equivalent of one week's full-time studies

<sup>6</sup> See Higher Education Ordinance, Annex 2 - Qualifications ordinance.

**B. General science knowledge**

Total	Higher education credits
Degree of Licentiate and Degree of Doctor:	minimum 7.5
<b>Obligatory subjects</b>	
Statistics	minimum 1.5
Ethics	minimum 1.5
<b>Eligible subjects (at least two of the following subjects)</b>	
<ul style="list-style-type: none"> <li>▪ Scientific theory</li> <li>▪ Pedagogy/Presentation techniques</li> <li>▪ Bio-informatics</li> <li>▪ Research documentation</li> <li>▪ Writing scientific reports</li> <li>▪ Medical information searching</li> <li>▪ Application for research grants</li> <li>▪ GLP (Good laboratory practice)/GCP (Good clinical practice)</li> </ul>	

The minimum requirement of general science knowledge shall be completed before the half-time review, or the licentiate seminar, can be completed.

**C. Courses**

Total	Higher education credits
Degree of Doctor	minimum 9
Degree of Licentiate	minimum 4.5

**C1. Project-specific courses**

All doctoral students shall obtain and present project-specific knowledge through further courses at either second-cycle (master) or third-cycle (doctoral) level.

<b>This knowledge is obtained by approved participation and examination in:</b>	
Courses within inter-departmental programmes at doctoral level	
Other courses at doctoral level	
Other adequate courses with approved course syllabus, including approved clinical specialisation courses (“SK courses”), that are of clear, direct relevance to the research project established in the individual study plan.	Maximum 4.5 higher education credits <sup>7</sup>

<sup>7</sup> The maximum number of higher education credits of this category that can be included in the compulsory 30 higher education credits.

## **C2. Compulsory knowledge for certain doctoral students**

### **Laboratory animal science**

For doctoral students who will be performing experiments on laboratory animals, the KI course in laboratory animal science, or equivalent, is compulsory (**minimum 3 higher education credits**).

The course shall have been successfully completed before the experiments on animals may begin.

### **Laboratory safety**

For doctoral students that will conduct some of their doctoral education in a laboratory, it is compulsory to obtain this knowledge (**minimum 1.5 higher education credits**) in the case that they lack basic knowledge in laboratory safety

### **Human biology or pathology**

For doctoral students lacking basic higher education knowledge in medicine, it is compulsory to acquire knowledge regarding human biology or pathology (**equivalent to 3 higher education credits**). This includes knowledge within public health sciences and pathology from a sociological perspective.

## **D. Other credit-bearing activities**

<b>Total</b>	<b>Higher education credits</b>
Degree of Doctor	minimum 6
Degree of Licentiate	minimum 3

All doctoral students shall participate in credit-bearing activities that will enable them to meet the learning objectives for doctoral education and develop into an independent researcher.

This knowledge shall be obtained *via*:

<b>Activities</b>	<b>Higher education credits</b> <sup>8</sup>		
Participation and personal presentation at international conferences.	1.5 per conference	minimum 1.5	maximum 4.5
Participation in seminar series, journal clubs etc. within the department	1-1.5 per semester, based on intensity	minimum 1.5	maximum 6
Period of research with a research group at a different university	1.5 per week		maximum 6
Participation in teaching within personal research area for practical pedagogical training	40 working hours for preparation in addition to the actual teaching provides 1.5 credits		maximum 3

In each individual case, the Departmental Director for Doctoral Education shall determine which course/s may be approved to fulfil these course obligations.

<sup>8</sup> The maximum number of higher education credits for this category that can be included in the compulsory 30 higher education credits.