

PhD Education Guidelines
Faculty of Science
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1. Mission statement

The main mission of the PhD Education program of FEW/FALW is to deepen the knowledge and skills of PhD candidates, enabling them to become fully qualified scientists with an excellent perspective for a career of their choice. The PhD program is tailored to the individual needs of PhD candidates. The program provides for a variety of activities enhancing the academic, professional and general skills of PhD candidates.

2. Introduction

The current guidelines present a framework for a PhD education program that is compliant with the VU PhD regulations, in particular with article 15, stating that "the PhD candidate shall devote at least 30 EC (840 hours) to training". The PhD education program comprises a number of activities that are shared by all research departments constituting the science faculties of VU University. Furthermore, in view of the highly diverse disciplines that are represented, each research department has the freedom to provide for a tailored program to their PhD candidates. In all cases, course and other activities are taught by renowned scholars of our faculties or colleagues from other universities, research institutes or companies that are fully qualified for providing education at the highest standards.

The PhD education program of the science faculty is based on a number of key principles

- PhD candidates are viewed as full members of the research community; their education program represents a professionalization of their skills
- the PhD education program is highly decentralized; PhD candidates and their supervisors have a primary responsibility to select adequate program elements, organize the participation of PhD candidates and monitor their achievements
- the faculty board encourages the participation of research departments in national doctorate schools. Education programs of national doctorate schools are fully recognized as valid program elements.

3. Organization of PhD education

3.1. The faculty board of the Faculty of Science is formally responsible for the PhD program, including the PhD training program, the assessment of PhD theses and the public examination/defense of the theses. The faculty has mandated this responsibility to the sub-PhD committees representing the individual research departments of the faculties, viz:

Department of Mathematics
Department of Physics & Astronomy
Department of Chemistry & Pharmaceutical Sciences
Department of Computer Science
Department of Molecular Cell Biology
Department of Neurosciences
Department of Earth Sciences
Department of Ecological Sciences
Department of Environment & Health Sciences
Department of Health Sciences
Athena
Institute for Environmental Studies

The sub-PhD committees comprise all regular and endowed professors of the research department. The sub-PhD committee is chaired by the head of the Department who is responsible for the proper implementation of the VU Doctorate Regulations. Admittance of the PhD theses for public examination/defense is granted by the Department Head and the Vice Dean of the faculty.

3.2. With the introduction of a formal PhD education program, the department head/chair of the sub-PhD committee is responsible for the implementation of the PhD Education program as described in this document. The department head can mandate this responsibility (stated in article 16.4 VU Doctoral regulations) to a senior scientist (UHD/HGL) of the department. The person mandated with this responsibility is to be called the PhD coordinator

3.3. The faculty will create and maintain a central website providing links to all course programs provided to its PhD candidates. The website will also provide a list of responsible persons within the different departments. For each course in the program, a description is provided comprising the content and scope of the course, the prior skills required, the duration and costs of the course, and the requirements to obtain the course certificate.

3.4. The PhD coordinator ensures that each PhD supervisor (promotor, co-promotor) is aware of the PhD regulations. The PhD supervisor carries the primary responsibility that the PhD candidate is fully informed regarding the regulations concerning the PhD education program.

3.5. The PhD coordinator ensures that PhD candidates receive full support by their supervisors, including a financial arrangement, to follow the required course of the PhD education program. A financial arrangement is part of the formal Training and Supervision Plan.

3.6 The PhD candidate is required to prepare a formal Training and Supervision Plan as stated in article 9 of the VU Doctorate Regulations. The first version of the Training and Supervision Plan will be submitted, together with Form I, to the department (is PhD coordinator and the Vice Dean within the first month of the admission of the PhD candidate. The Training and Supervision Plan is reviewed during the annual review (*jaargesprek*) of the PhD candidate with

his/her supervisor(s). Once the supervisor has approved the dissertation, the PhD candidate shall submit the final version of the courses/activities that he/she has taken to the department (is PhD coordinator). The final version is submitted together with Form II to the Vice Dean for a final check before receiving the faculty certificate.

3.7 A research department may decide to participate in a national doctorate (graduate) school. PhD candidates of the department are subsequently obliged to follow the regulations of the national doctorate schools. The faculty board will take a formal decision that a national doctorate school fulfills all criteria of the VU Doctorate Regulations with respect to the PhD education program. After the formal decision, all PhD candidates that successfully have followed the education program of the national doctorate school will automatically receive the faculty certificate. All of the NVAO accredited national doctorate school programs are accepted. A partial list is provided in appendix 1.

4. Course types

The following course types are distinguished:

A. Scientific Integrity

A mandatory course for each PhD candidate (internal and external). Minimum of 2 EC.

B. General skills courses and activities

Courses may include scientific writing, presentation, management skills or similar courses. Other activities are (formal) Training for Education, participation in representative councils, participation in BSc/MSc Information days, organization of community events such as conferences.

C. Scientific specialization courses

Courses include methodological skills, training programs for complex instruments, capita selecta courses, writing of grant proposal and participation in scientific colloquia. Capita selecta courses may be given on an individual basis¹.

D. Research-related activities

Activities include visit to conferences, presentation of lectures and posters, participation in workshops.

In order to ensure that each PhD candidate participates in each of these course types the following minimum/maximum EC are specified:

A: 2 EC

B+C: min 8 EC, maximum 20 EC

D: min 8 EC, maximum 20 EC

Appendix 2 provides a list of course elements and the EC's awarded to each course type.

¹ This includes the guidance provided by to the PhD by the PhD supervisor as it might constitute the most important educational aspect of the PhD.

5. Exemptions

Article 15.1 of the VU Doctorate Regulation states that ' the faculty may grant an exemption covering all or parts of the provisions of paragraph 1'.

The faculty board recognizes the following reasons for granting a partly or full exemption from the demands to devote at least 30 EC (840 hours) to training and education:

- due to seniority of PhD candidate (f.i. long-term experience in R&D)
- due to double-degree PhD, education takes mainly place at partner university
- due to personal circumstances (illness, difficult private circumstances etc.)
- due to professional circumstances (for example, field work or extensive teaching load)

In addition, those candidates who have completed a two-year Research Master² in a relevant scientific field *can* apply for exemption for a maximum of 12 ECs, as long as the exemptions are for skills courses, training for complex instruments, elective courses and/or parts of a research project that are a preparation for the PhD program. PhD candidates who have completed a two-year Research Master cannot apply for exemption for introductory and compulsory courses.

PhD students who have a three-year contract and part-time or “external” PhD students should in principle also obtain 30 EC, but can apply for exemption based on the reasons mentioned above. For each “external” PhD student the department will decide whether this PhD student receives a certificate.

6. Certification

The faculty will include the certification of the ECs in an adjusted version of FORM II where will be stated to handover a list of all courses and activities been followed by the PhD candidate. This list should include exemptions accompanied by argumentation. This part will be signed by the department PhD coordinator and the Dean.

² Not KNAW accredited bèta masters included.

7. Transition guidelines

These following guidelines only apply to PhD candidates who started their program prior to 1-4-2015. PhD candidates falling in this category may still be eligible to the regulations of the present PhD Education Program upon their own request. Applications including exemption requests should be submitted to the department PhD coordinator and the Dean. The following table summarizes the different regulations that apply, depending on the starting date of the PhD candidate.

Starting date	Participation in PhD Education Program	VU PhD regulations
1-4-15 and after	Mandatory	'New' (2018)
prior to 1-4-15	Voluntary	'New' (2018)

Appendix 1: National doctorate schools recognized by faculty boards

Doctorate school	Leading institution	VU Department involved	Responsible contact person
ONWAR	VU University	Neurosciences	Prof. Guus Smit
SIKS	VU University	Computer Science	Prof. Henri Bal
SENSE	VU University	IvM	Dr. Ad van Dommelen
HRSMC	UvA	Chemistry	Prof. Matthias Bickelhaupt
ASCI	TUD	Computer Science	Prof. Henri Bal
IPA Institute for Programming research and Algorithmics	TUE	Computer Science	Wan Fokkink
Subatomic Physics, Theoretical Physics	FOM	Physics	Prof. Piet Mulders
WTMC	Maastricht University	Athena	Prof. Joske Bunders
CARE	VU University	Health Sciences	Prof. Maurits van Tulder
Amsterdam graduate school of Physics ³	VU University & UvA	Physics	TBD

³ To be launched at the formal merger of the Physics and Astronomy departments of VU and UvA

Appendix 2: Exemplary course elements

Course element	EC	Remarks
A. Mandatory courses (minimum 2 EC)		
Scientific integrity	2	
B. General skills (B+C: minimum 8, maximum 20 EC)		
Scientific writing, presentation, management skills	PM	EC according to course specification
Training for education	3	Certificate of formal course is provided
Participation in representative councils	2	Example: OR, ODC, ProVU, PhD Council
Participation in BSc/MSc Information days	2	Confirmation by head communication & marketing is provided
Organization of community events	2	Organization of conferences etc
C. Scientific specialization		
Training on complex instruments	PM	Detailed specification is provided by the supervisor
Methodologies, Statistics	PM	EC according to course specification
Capita Selecta	6	In case of individual courses, a detailed specification is provided by the course supervisor
Participation in colloquia, seminars	6	
Preparation of Rubicon or comparable grant application	2	
D. Research-related activities (minimum 8, maximum 20 EC)		
Conference visit	1	
Poster, lecture at conference	1	
Participation in workshop	2	