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 faculties 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 FEW/FALW 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 Environmental Sciences
Department of Health Sciences
Athena Institute

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 to a member of the management team of the department.

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 department head/mandated MT member 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 department head/mandated MT member 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 head/mandated MT member 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 the
department head/mandated MT member. 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 basis\(^1\).

**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.

**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 twoyear Research Master in a relevant scientific field can apply for exemption 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 twoyear 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.

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\(^1\) 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.
6. Certificate

The faculty will grant a formal certificate to each PhD candidate. The certificate will state the fact that the PhD candidate has successfully fulfilled all requirements of the Educational Program for PhD candidates of VU University Amsterdam. In addition, the certificate will contain a list of all courses and activities that have been followed by the PhD candidate. The certificate is signed by the department head/mandated MT member and the Vice Dean.

7. Transition guidelines

These following guidelines only apply to PhD candidates who started their program prior to 1-1-2015. 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 head/mandated MT member and the Vice Dean. The following table summarizes the different regulations that apply, depending on the starting date of the PhD candidate.

<table>
<thead>
<tr>
<th>Starting date</th>
<th>Participation in PhD Education Program</th>
<th>VU PhD regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4-15 and after</td>
<td>Mandatory</td>
<td>'New' (2015)</td>
</tr>
<tr>
<td>1-1-15 until 31-3-15</td>
<td>Voluntary</td>
<td>'New' (2015)</td>
</tr>
<tr>
<td>prior to 1-1-15</td>
<td>Voluntary</td>
<td>'New' (2015)</td>
</tr>
</tbody>
</table>
Appendix 1: National doctorate schools recognized by faculty boards

<table>
<thead>
<tr>
<th>Doctorate school</th>
<th>Leading institution</th>
<th>VU Department involved</th>
<th>Responsible contact person</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONWAR</td>
<td>VU University</td>
<td>Neurosciences</td>
<td>Prof. Guus Smit</td>
</tr>
<tr>
<td>SIKS</td>
<td>VU University</td>
<td>Computer Science</td>
<td>Prof. Henri Bal</td>
</tr>
<tr>
<td>SENSE</td>
<td>VU University</td>
<td>IvM</td>
<td>Dr. Ad van Dommelen</td>
</tr>
<tr>
<td>HRSMC</td>
<td>UvA</td>
<td>Chemistry</td>
<td>Prof. Matthias Bickelhaupt</td>
</tr>
<tr>
<td>ASCI</td>
<td>TUD</td>
<td>Computer Science</td>
<td>Prof. Henri Bal</td>
</tr>
<tr>
<td>IPA Institute for Programming research and Algorithmics</td>
<td>TUE</td>
<td>Computer Science</td>
<td>Wan Fokkink</td>
</tr>
<tr>
<td>Subatomic Physics, Theoretical Physics</td>
<td>FOM</td>
<td>Physics</td>
<td>Prof. Piet Mulders</td>
</tr>
<tr>
<td>WTMC</td>
<td>Maastricht University</td>
<td>Athena</td>
<td>Prof. Joske Bunders</td>
</tr>
<tr>
<td>CARE</td>
<td>VU University</td>
<td>Health Sciences</td>
<td>Prof. Maurits van Tulder</td>
</tr>
<tr>
<td>Amsterdam graduate school of Physics$^2$</td>
<td>VU University &amp; UvA</td>
<td>Physics</td>
<td>TBD</td>
</tr>
</tbody>
</table>

$^2$ To be launched at the formal merger of the Physics and Astronomy departments of VU and UvA
## Appendix 2: Exemplary course elements

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