

Doctoral studies and Doctoral Schools in Flanders and at Ghent University

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2 Introduction

This document is prepared in the framework of the TEMPUS Project “RODOS – Reform of Doctoral Studies in Serbia (544093-TEMPUS-1-2013-1-RS - TEMPUS-SMGR-2013-5028/001-001)” to be included in the final report of the project.

The objective is to present the Flemish (legal) framework for doctoral studies and doctoral schools in general, and the organization of doctoral studies and doctoral schools at Ghent University in particular.

3 Flemish (legal) framework for doctoral studies and doctoral schools

3.1 The Bologna process and doctoral studies

After signing the Bologna Declaration the Flemish Minister of Education started a process to reform the Flemish higher education system. The Flemish Parliament adopted a new Higher Education Act on the 4 April 2003. The degree structure based on three main cycles constitutes the core of the Act, which introduced this new structure for all programmes.¹

The higher educational system consists of professional Bachelor's Degrees, academic Bachelor and Master degrees, and doctoral degrees. Bachelor programmes cover at least 180 ECTS, Master programmes at least 60 ECTS. Bachelor and Master degrees can be followed by advanced Bachelor or Master studies (each comprising at least 60 ECTS).

Doctoral programmes do not use the ECTS system and there is no minimum or maximum duration. Universities can issue doctoral degrees in all the disciplines in which they are allowed to issue Master degrees. There is no separate accreditation procedure for the doctoral level.

A doctoral degree is awarded after the successful defence of a doctoral dissertation. There are no legal requirements regarding coursework. Universities are allowed to organize (non-mandatory or mandatory) doctoral training and issue certificates upon completion of a doctoral training programme.

Doctoral programmes are open to graduates with a relevant Master degree, in some cases after a preliminary examination (depending on the study field). Foreign higher education degrees give access to Doctoral programmes if the university board considers the foreign higher education degree equivalent to a Flemish Master degree. The admission may still depend on a preliminary examination.²

3.2 Establishment of Doctoral Schools and the 2011 government subsidy

In the wake of the 2005 Salzburg Principles initiative all five Flemish universities started to establish doctoral schools in order to bring the support offered to doctoral students in line with these principles. In all universities these new doctoral schools were conceptualized as broad

¹ <http://www.studyinlanders.be/en/education-system/structures/>

² <http://www.studyinlanders.be/en/education-system/admission-requirements/>

support structures, overarching multiple disciplines and offering both discipline-specific training and training in transferable skills. Different organizational models were established: one central doctoral school with faculties made responsible to provide discipline specific training (University of Antwerp), up to three separate doctoral schools (typically: SSH, STEM, Life Sciences) with some central support, e.g. for transferable skills training (KU Leuven, VUB, UHasselt), or a strong central structure bringing together five disciplinary doctoral schools (Ghent University, see below). Besides offering doctoral training, these newly established doctoral schools also (to various extents) took on responsibilities regarding quality assurance (e.g. progress reports), internationalization (e.g. joint/double degrees) and networking with the non-academic labour market (e.g. job fairs).

As of the academic year 2011-2012 the Flemish Minister for Research decided to grant an annual subsidy of 4 million euro to the five Flemish universities to be spent exclusively on supporting young researchers – hence the name of this subsidy: OJO ('Ondersteuning Jonge Onderzoekers' – 'Support to Young Researchers'). It was decided that 'young researchers' can apply to doctoral students, postdoctoral fellows as well as starting (tenure track) professors. The subsidy, which is being paid to the separate universities mainly in line with their size (number of doctoral students, postdoctoral fellows, etc.), comes with a number of restrictions:

- One fourth of all expenses should go to Flemish interuniversity initiatives (involving at least three universities);
- Activities that are organized by means of the subsidy should fall within the framework that is set out in the Government Act; the subsidy cannot be spent on research activities;
- Organizing training on gender & diversity in academia and on research integrity is mandatory, as well as organizing one annual job fair or other career event.

The government subsidy in the meantime has become structural (2016-2017 it will be granted for the sixth time), and the amount of 4 million euro until now has not decreased. Although universities still allocate own funds to the support of young researchers, the subsidy has proven to be substantial, and it has been successful both in encouraging interuniversity collaboration and in reaching other young researchers than just those working on a PhD (in particular the growing group of postdoctoral fellows).

4 Doctoral studies and doctoral schools at Ghent University

4.1 Ghent University (doctoral) education at a glance

Ghent University is proud of its high standard of education. An intensive system of quality assurance, innovation in teaching methods and the use of the newest support technology together with highly skilled teaching staff help to maintain or even improve this standard. Moreover, Ghent University meets international benchmarks. It was among the first universities in Europe to successfully apply for the ECTS-label (2004), awarded by the European Commission. It shows that Ghent University makes every effort to guarantee academic recognition and to facilitate the transfer of learning experiences.

The educational offer encompasses virtually all academic fields of study. From Oriental Languages and Cultures to Pharmaceutical Sciences, from Criminology to Business Engineering. Ghent University is the only university in Belgium with the authority to organize study programmes in Veterinary Medicine, African Languages and Cultures, and Engineering Sciences

– Applied Physics. Also unique at Ghent University are the options Geometrics and Surveyance and Maritime technology.

Bachelor's programmes at Ghent University comprise 180 ECTS credits (3 years). Most Master's programmes comprise either 60 ECTS credits (1 year) or 120 ECTS credits (2 years). The official language of instruction for all Bachelor's programmes and most of the Master's programmes is Dutch. Nevertheless, a growing number of Master's programmes are taught in English. For exchange students there is a wide range of English-taught courses to choose from. Several faculties offer a specific exchange programme for incoming students.

Doctoral degrees (89 in total: <http://www.ugent.be/en/research/doctoralresearch/doctoral-degrees.htm>) are awarded by one of the 11 faculties, each of which covers one or more adjacent disciplines. Students involved in an interdisciplinary project can apply for a combined degree (i.e. a degree combining two or more existing degrees). Doctoral training is offered by five multidisciplinary Doctoral Schools. Ghent University awarded 660 doctoral degrees in 2015 of which over 30% went to international (i.e. non-Belgian) young researchers.

4.2 Doctoral studies at Ghent University

For candidates wishing to obtain a PhD degree from Ghent University, there are two important requirements that must be complied with before submitting an application. Firstly, their PhD application must be endorsed by a Ghent University supervisor. Secondly, the issue of funding has to be clarified: doctoral students have to dispose of sufficient financial means for the entire duration of their project. The faculty that will issue the degree is responsible to assess each individual application.

At Ghent University, every doctoral student is assigned more than one mentor: either two (or more) supervisors, a doctoral advisory committee in addition to the supervisor(s), or a faculty mentor in addition to the supervisor. Doctoral students have to comply with the faculty regulations for their guidance, but they can always ask for the installation of a doctoral advisory committee. Upon acceptance the faculty will also decide whether or not a compulsory training programme should be followed.

Maximum one year after they have been admitted to the doctorate by the Faculty Board, all doctoral students are required to submit a progress report. They have to do so annually as it is directly linked to their re-registration. The progress report gives the doctoral student the opportunity to reflect on the present status of his/her doctoral research, launch future research initiatives and report on his/her doctoral training activities (specialist studies, transferable skills and research-related activities). If the progress is considered as insufficient, the supervisory team can advise to the faculty not to allow the student to re-enrol for the doctorate.

Submission of the doctoral dissertation at the faculty may be subject to particular conditions (compulsory training programme, minimum number of publications, etc.) The Faculty Board will check whether all conditions are met and appoint an Examination Commission, consisting of 5 to 8 members. Supervisor(s) may participate in this Commission without voting rights. The members of the Examination Commission hold a first, closed meeting during which doctoral students are also heard. After this first meeting they will decide whether the student can be admitted to the second part of the examination: the public defence. In some cases adjustments to the thesis may be required. Students receive a copy of their deliberation. The second part of

the doctoral examination is an oral defence in public. If the defence is successful, the university issues the diploma and (if applicable) a certificate for the Doctoral Training Programme. There are no grades connected with graduating as a doctor at Ghent University.

4.3 Doctoral training and Doctoral Schools at Ghent University

Doctoral training at Ghent University is organized at the level of the five Doctoral Schools that overarch all the disciplines covered by the 11 faculties:

- Doctoral School of Arts, Humanities and Law
- Doctoral School of Social and Behavioural Sciences
- Doctoral School of Natural Sciences
- Doctoral School of (Biosciences) Engineering
- Doctoral School of Life Sciences and Medicine

Each Doctoral School is led by a director (a Ghent University professor), and its activities are overseen by a Doctoral School Council (with representatives from all the relevant faculties, belonging to both professorial and assistant academic staff). The five Doctoral Schools are centrally supported by a Doctoral Schools Coordination Unit. On the operational level, the five directors meet in a Board in order to make sure that policies and practices are kept sufficiently uniform. On the strategic level, the five directors meet with the academic directors for research, education and internationalization, as well as with representatives from the assistant academic staff in a Steering Group. Both the Board of Directors and the Steering Group meet several times a year.

While attending doctoral training courses is a privilege to all doctoral students at Ghent University, it is only compulsory if the faculty decides so. Doctoral training can be imposed either on an individual basis (e.g. if previous training is considered insufficient) or as a general rule. The majority of doctoral students don't have a compulsory programme (except for the annual progress report). This group can freely decide whether or not to attend training, and which number of courses (until a maximum is reached). In order to obtain a doctoral training certificate, students need to successfully complete the following activities:

- 3 specialist courses
- 3 courses in transferable skills (to be taken from three out of four different clusters)
- 3 conference presentations (oral/poster)
- 1 international peer-reviewed publication

In addition, the certificate cannot be obtained without defending the dissertation. The Ghent University doctoral training programme does not use a credit system.

In order to become part of the doctoral curriculum, a course needs to be either organized or recognized by the Doctoral School of which the doctoral student is a member. Doctoral students can freely choose the courses they consider as relevant, as long as their supervisor agrees and the course complies with certain rules: minimum of contact hours, PhD (or at least Master) level. This means that they pick courses organized by other institutions as well by other external organizations. The maximum number of courses to be followed in each category is 6. In addition to that, students can attend regular (Master and Bachelor) courses up to 30 ECTS.

Apart from organizing doctoral training, the Doctoral Schools are also active in a number of other domains: quality assurance of doctoral education, employability of doctoral candidates, and internationalization of the doctoral experience. Quality assurance at the doctoral level is guaranteed by a quality framework that allows to detect gaps in the quality system and to formulate and implement actions to overcome these gaps. In order to prepare doctoral candidates for the non-academic labour market, and to bring non-academic employers closer to graduating doctoral students, a number of labour-market activities are organized, incl. an annual conference and an annual job fair. Internationalization of the doctoral experience is accomplished by inviting international top experts when organizing local courses, as well as by stimulating doctoral students to attend top-level doctoral training abroad.

Apart from the generic doctoral training programme offered by the five Doctoral Schools, particular smaller cohorts of doctoral students also take part in separate doctoral training programmes that are funded by the Erasmus Mundus (past) and Horizon 2020 (present) funding schemes. Up to now Ghent University has coordinated the following programmes:

- MARES – Doctoral Programme on Marine Ecosystem Health and Conservation (Erasmus Mundus): <http://mares-eu.org/>
- FUSION-DC – International Doctoral College in Fusion Science and Engineering (Erasmus Mundus): <http://www.em-fusion-dc.org/>
- SuPER-W – European Joint Doctorate on Resource, Product and Energy Recovery from Wastewater (Horizon 2020): <http://www.superw.ugent.be/>

5 Funding of doctoral studies

5.1 Flemish funding of doctoral students

5.1.1 Third party funded research

Various types of personal scholarships can be applied for with the Flemish Research Fund (FWO). The two most important ones are the traditional PhD fellowship and the Doctoral (PhD) grant strategic basic research (SB) for research focusing on innovation. Scholarships are awarded on the basis of a research project. Applicants need the support of a supervisor who is employed at a Flemish university. Certain restrictions should be taken into consideration: applicants should have a Master degree from one of the countries of the EU or the EER or Switzerland, they cannot be older than 31 years (unless they have obtained Master degree no longer than 5 years), and they cannot have more than three years scientific seniority. In 2015 the Flemish Research Fund awarded 218 PhD fellowships, of which 63 went to Ghent University researchers. The number of grants for strategic basic research awarded in the same year was 199. Researchers wishing to pursue a doctoral degree in collaboration with an industrial partner can apply for a Baekeland mandate (funded by VLAIO – Flanders Innovation & Entrepreneurship).

Supervisors can also employ doctoral researchers on project funding that they have applied for with third party funding agencies such as the Flemish Research Fund, the Federal Public Planning Service Science Policy (BELSPO), etc. These researchers will either be given a scholarship or be employed as scientific staff on a temporary contract.

5.1.2 Ghent University Special Research Fund

Each Flemish University receives an annual government allowance to be spent entirely on fundamental research. With this funding Ghent University launches annual calls both for personal scholarships (different types: doctoral scholarships, doctoral scholarships for candidates from developing countries, funding for candidates for a joint doctorate, and finalizing PhD grants) as well as for research project funding on which, again, doctoral researchers can be employed. Both ways of obtaining scholarships or PhD positions are comparable to the way in which the Flemish Research Fund works.

The typical duration of a scholarship (either of the Flemish or the Special Research Fund) is four years (two times two years). Four years is also the maximum duration for this kind of (tax free) scholarships.

5.1.3 Alternative ways of doing a PhD

Apart from competitive funding, prospective doctoral researchers can also apply for vacancies in one of the research departments. They are then employed as assistant academic staff. Such staff members are employed for two years (to be renewed twice up to six years), and 50% of their time should be spent on preparing the PhD.

International doctoral researchers often also receive funding from their home country or from specific third-party funders (such as VLIR-UOS for students from developing countries). It is also allowed to start a PhD without funding, e.g. by people having careers in industry or in other sectors, or by people who are unemployed but have sufficient personal funding. In these cases doctoral researchers will only be enrolled as students. Ghent University since recently has a policy for doctoral students without sufficient funding to cover the basis research costs: these students are asked to pay a bench fee to their research group.

5.2 EU funding

EU budgets coming from the Horizon 2020 programs are a last but growing source of funding for doctoral research. Students can be either funded with the grants that top researchers receive from the ERC (European Research Council) or they can apply for a position within one of the multilateral ITN's (Innovative Training Networks) funded through the Marie Skłodowska-Curie Actions (MSCA). There are three types of ITN's: European Training Networks (ETN), European Industrial Doctorates (EID) and European Joint Doctorates (EJD). Doctoral candidates can be employed within an ITN for up to three years. The ITN's also include funding for training and mobility.

6 Conclusions

The Bologna Process implementation in 2004 first addressed the transformation of all study programs at Ghent University into Bachelor and Master degree programs. Since 2007 also the doctoral studies were adapted according the Salzburg Principles and Salzburg II, mainly through establishing five Doctoral Schools that gradually became the main support structure for all Ghent University doctoral students. Apart from establishing a common structure for doctoral training for all doctoral students, the Doctoral Schools contributed significantly to the process of making structures and regulations for doctoral education more uniform, thus paving the way for an improved university-wide quality assurance system.