



UNIVERSITY of OULU
OULUN YLIOPISTO

University of Oulu Graduate School

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Appendix 1: Report of the Transferable Skills Working Group

Summary

This report presents the plans for the University of Oulu Graduate School (UniOGS). The purpose of this report was to further develop the plans and identify the actions already taken for the UniOGS. So far, the management structure of the school has been identified and clarified, which makes it possible to initiate the activities leading up to the opening of the school on 1st August 2011. Second, suggestions were made for the common rules for admission, the application process and the admission of the students. Thirdly, this report presents the importance of offering high-quality training for doctoral students by making some recommendations for the doctoral training process. Moreover, some useful practices are presented, emphasizing the importance of planning and defining the broad outlines of correct study and research structures for each student. All recommendations are made with the aims of favouring high-level research in the multi-disciplinary environment of the University of Oulu; producing top-level doctors capable of operating professionally, both in academia, and in other sectors; and providing Ph.D. students with skills to solve problems with scientific methods in academia, administration, private enterprise, or other sectors.

1. Introduction

The Rector of the University of Oulu, Prof. Lauri Lajunen, appointed a Working Group (referred to here as the *UniOGS Working Group*) to make detailed plans relating to the implementation of the University of Oulu Graduate School (UniOGS), with the aim that the latter starts its activities on August 1st, 2011. The deadline for the *UniOGS Working Group* to submit its final report was set as May 13th, 2011 (extended to May 20th, 2011).

1.1 Assignment and members

The *UniOGS Working Group* was chaired by Vice-Rector for Research, Prof. Taina Pihlajaniemi, and included the following members: Prof. Vanessa Andreotti, Ph.D. student Andrew Conlin, Coordinator Sinikka Eskelinen, Prof. Harri Haapasalo, Prof. Markku Juntti, Prof. Sanna Järvelä, Prof. Sari Kunnari, Dr. Eva Maria Raudasoja, head of teaching administration, Prof. Arja Rautio, Dr. Leila Risteli (until February 28, 2011), Prof. Outi Savolainen, Prof. Veikko Seppänen, Vice-Rector for teaching, Prof. Olli Silvén, Ph.D. student Hannah Strauss, Doc. Kaisa Tasanen-Määttä, and Prof. Jari Oksanen (from March 25th). Elina Rossi was the secretary of the group.

The *UniOGS Working Group* had six meetings, January 18th, 2011; February 11th, 2011; March 1st, 2011; March 25th, 2011; April 20th, 2011; and May 6th, 2011.

In addition, three subgroups of the *UniOGS Working Group* were formed to carry out more detailed tasks related to the major topics to be addressed by the Work Group. These subgroups had several other meetings.

1.2 Background and context of the work

The task of the *UniOGS Working Group* was based on earlier plans presented by the working group for developing graduate education (report entitled "*Tutkijakoulutus Oulun yliopistossa: Tohtori- ja kansainvälisen maisterikoulutuksen nykytila ja uusi toimintamalli*", submitted on June 23rd, 2010). The Board of Directors of the University of Oulu decided, on October 19th, 2010, that the University of Oulu will start a Graduate School, which will have the administrative responsibility for both doctoral degrees and for International Master's Degree programmes. The task of the *UniOGS Working Group* was to develop plans, based on the earlier reports and the decision of the Board of Directors, that would provide the framework for starting the activities of the UniOGS on August 1st, 2011.

As described in the earlier plans, the major goals of the UniOGS are to provide the framework for high-quality doctoral education for all students of the University of Oulu. This will necessitate the adoption of more uniform practices, throughout the University of Oulu, relating to application, admission and registration procedures, research and course work requirements, thesis work supervision and follow-up, and thesis examination procedures. These practices should result in shorter times to obtain the degree. The general goals of the Graduate School are discussed at length in the report "*Tutkijakoulutus Oulun yliopistossa*". Simultaneously, an improvement of doctoral education is expected to improve the quality of research throughout the University.

International Master's Degree programmes will be included under the umbrella of the UniOGS.

Plans had already changed to some extent since the submission of the earlier report (*Tutkijakoulutus Oulun yliopistossa*). In particular, a structure including only three Doctoral Training Committees to cover all doctoral studies at the University was considered to be more beneficial than the five that were originally planned. Thus, it was decided that UniOGS would include:

- a Doctoral Training Committee for Health and Biosciences,
- a Doctoral Training Committee for Human Sciences, and
- a Doctoral Training Committee for Technology and Natural Sciences.

Furthermore, the University of Oulu had decided to appoint a Dean of the Graduate School, who would head the functioning of the school. The work of the current group started based on these developments.

While the *UniOGS Working Group* was working, the University of Oulu's teaching by-laws (*Oulun Yliopiston Koulutuksen Johtosääntö*), governing the overall responsibilities and decision-making relating to student admission, curriculum acceptance, and thesis evaluation in the graduate school, were also being developed within the university. There was considerable interaction between these two areas of development.

The *UniOGS Working Group* first had some general discussions on its tasks and further defined its work. It then divided its work into three major tasks, each of which was assigned as the main focus of responsibility of a subgroup of the *UniOGS Working Group*. Thus, the three *UniOGS Working Group* subgroups were respectively responsible for defining the procedures related to:

- Entering the graduate school (Selection, admission, and registration of students)
- Milestones and Follow-up for Doctoral students, and
- Requirements for a Doctoral degree, acceptance of thesis work and processes aiming to facilitate the completion of the doctoral training.

In addition, separate Working Groups were appointed for:

- Development of the curriculum for transferrable skills and general education, and
- International Master's Degree Programmes.

During its work, the Working Group was also allocated the task of proposing candidates for the appointment of:

- the Dean of the Graduate School,
- the Chairpersons of the three Doctoral Training Committees (see above), and
- the full-time Coordinators of the three Doctoral Training Committees.

It was recognized that the University of Oulu knows remarkably little about its doctoral student population; this is at least partly due to the very diverse and haphazard practices of registration encountered in the different faculties. Thus, it was considered very important to work with the teaching administration to make sure that doctoral students and their studies are appropriately registered. This will allow the students, supervisors, and follow-up groups to be better aware of the progress of the studies. Further, it will allow the university to examine and follow the progress of doctoral studies from admission to degree completion. This part of the work progresses in close cooperation with *the Department of Educational Affairs and Student Services* and the respective faculty staff.

The work of the *UniOGS Working Group* focused mainly on procedures for the actual doctoral studies. The funding of the studies is a separate issue, since the UniOGS currently has no positions to offer. The Graduate School will work together with the providers of doctoral training funding, such as the Ministry of Education and Culture (MinEdu)/Academy of Finland-funded doctoral programmes, individual principal investigators, and others, in order to make a coherent structure encompassing the administration and procedures of the actual training.

2. Management Structure

The University of Oulu Graduate School (UniOGS) is the organizational framework for the high-quality training of all doctoral students enrolled at the University of Oulu. The management structure and the roles of the managerial bodies are described in the following paragraphs.

2.1 UniOGS doctoral training

The overall UniOGS management structure is summarized below (see also [Figure1](#), Page 7).

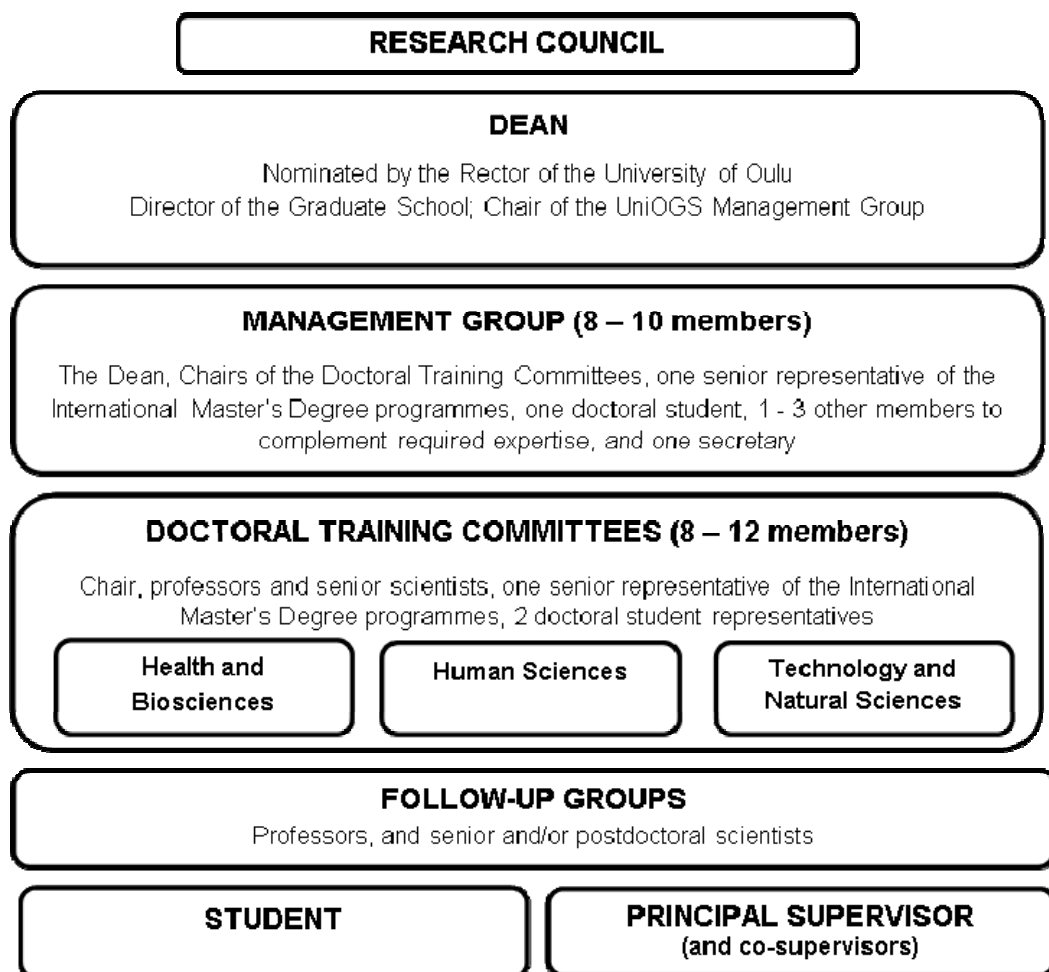
- a) The **Research Council** of the University of Oulu oversees the UniOGS activities; the UniOGS reports to the Research Council.
- b) The **Dean**, nominated by the Rector of the University of Oulu, is the director of UniOGS and the Chairperson of the UniOGS Management Group. The Dean:
 - is responsible for establishing the criteria for the selection of doctoral students,
 - accepts new students to the doctoral programmes,
 - approves the curricula of Doctoral education,
 - approves the criteria for accepting the doctoral thesis,
 - grants the doctoral degrees, and
 - nominates the members of the Doctoral Training Committees.
- c) The **Management Group** of UniOGS is suggested to include the Dean, the Chairpersons of the Doctoral Training Committees, one senior representative of the International Master's Programmes, a doctoral student (chosen by the students and nominated by the Dean), one to three other members, depending on the expertise needed, and a Secretary. The Coordinators of the Doctoral Training Committees work with the Management Group, preparing material for the meetings and may participate in its meetings as "*Presenters*". The Management Group is responsible for:
 - the harmonization of processes, and the definition of standards,
 - establishing and ensuring the rights of students and supervisors, and the resolution of conflicts,
 - the compilation of the curriculum for common transferable skills and general education studies provided by the UniOGS,
 - the general management, monitoring and conclusions of doctoral education.
- d) Each of the UniOGS **Doctoral Training Committees** includes the Chairperson of the Doctoral Training Committee (nominated by the Dean), professors and other senior scientists with active supervisory responsibilities and representing the research fields of the Doctoral Training Committee, one senior representative of the International Master's Degree programmes, and two student representatives. The Coordinator of the UniOGS Doctoral Training Committee and the Chief Academic Officers of the affiliated Faculties will share the task of "*Presenters*" and Secretary of the Doctoral Training Committee. The Doctoral Training Committees are responsible for:
 - recommending (to the Dean) the admission of students into the UniOGS,
 - managing the processes of student selection, admission and registration,
 - appointing supervisors of doctoral students,
 - appointing the members of the Doctoral Training Follow-up Group for each registered student,
 - the acceptance of the full Doctoral Training Plan (includes both the research and study plans of the student),
 - drafting and proposing (to the Dean) the criteria for thesis evaluations,

- naming of examiners and granting permission for the publication of the thesis,
- naming of thesis opponents, and
- the approval of dissertations.

Some of these tasks may be delegated to Doctoral Programmes that have a proven, well-development, management structure (e.g. MinEdu/Academy-funded Doctoral Programmes).

- e) The Doctoral Training **Follow-up Groups**, appointed by the Doctoral Training Committees, are composed of professors and senior and/or postdoctoral scientists. They are responsible for:
- the annual evaluation and reporting of the students' doctoral training progress,
 - ensuring that the training is progressing according to schedule and under the best conditions possible, and
 - ensuring that the students are receiving adequate supervision and guidance.
- f) The **Principal Supervisor** (assisted by one or two co-supervisors) is responsible for guiding the **student** through the whole doctoral training process and for encouraging the student to acquire the skills necessary for the development of a successful career. These supervisory roles include ensuring that each student receives appropriate support for the planning and implementation of the work related to his/her research and studies.

Figure 1: Management Structure of the University of Oulu Graduate School



2.2 International Master's degree programmes

In general, the International Master's Degree (IMD) programmes are research-oriented, and are designed to provide for fast tracks for doctoral studies. They are administered by the faculties, but are also included in the graduate school, and have representation in the Doctoral Training Committees that act as their steering bodies. A student in an IMD programme can, upon application, be conditionally admitted to a doctoral training program (see [Section 3.3](#)).

The Chair of an IMD programme and a possible Degree Programme Committee is nominated by a Vice-Dean of Education of the Faculty that provides the major content in the programme. The Vice-Dean of Education also accepts the curriculum of the IMD programme and grants Master's Degrees on behalf of the Faculty. A study plan of a student, prepared according to the accepted curriculum, is accepted by the Chair of the IMD programme. Study plans with deviations from the curriculum are accepted by the Dean of Education.

The Vice-dean of Education makes the nominations concerning IMD program Chairs and committee members after consultation with the Doctoral Training Committee. For coordination purposes, the Chair of an IMD programme can be nominated to the Education Committee of the relevant Faculty of the University.

3. Entering the Graduate School

In this chapter, the requirements and application process for admission into the UniOGS, as well as the admission/registration process itself, are discussed. Upon registration, all students will be granted Study Rights for a period of four years, which can be extended under certain conditions; these conditions are also discussed here.

3.1 Requirements for admission to the UniOGS

UniOGS considers applications for doctoral studies from students with a Master's degree. In some cases, as explained below, a Bachelor's degree is sufficient. It is recommended that students contact prospective supervisors before applying.

3.1.1. Minimum requirements for admission to the UniOGS doctoral programmes

The minimum requirements for admission to the UniOGS doctoral programmes relate to previous studies and language skills. A student must hold a Master of Science (M.Sc.), or Master of Arts (M.A.) degree, or their equivalent, granted by a recognized or accredited university with good (3/5) grades both for the course work and for the M.Sc. or M.A. thesis.

A student is required to have sufficient English language skills, which must be demonstrated by a Master's degree, or its equivalent, or by an international test of English language proficiency (such as TOEFL), or by another means of demonstrating proficiency (e.g. the prospective supervisor's approval of the applicant's language ability).

Applicants may be admitted to the UniOGS doctoral programmes with a Bachelor degree if the applicant fulfills at least one of the following criteria:

- the applicant has been given the right to undertake doctoral studies in another university from abroad, and the studies in Oulu would lead to a double or joint doctoral degree,
- the applicant has been admitted to an International Master's Programme of the UniOGS and plans to continue to a doctorate in Oulu; the admission is conditional

- and requires passing the Master's degree with good grades (at least 60% of full score) for both the course work and the Master's thesis, or
- the applicant is a student of the Faculty of Medicine with a Bachelor of Medicine degree and is working in a research group.

3.1.2. Minimum requirements for admission to the UniOGS International Master's programmes

The minimum requirements for admission to the UniOGS International Master's Degree programmes relate to previous studies and language skills. A student must have a Bachelor of Science (B.Sc.), or Bachelor of Arts (B.A.) degree, or their equivalent, granted by a recognized or accredited university with good grades (at least 60% of full score) for both the course work and the B.Sc. or B.A. thesis. The degree should be equivalent to at least three years of full-time studies (180 ECTS).

A student is required to have sufficient language skills in English, which must be demonstrated by one of the following:

- Upper Secondary Education in English from an institution located in Finland, Sweden, Norway, Denmark, Iceland, Great Britain, Ireland, USA, Canada, Australia, or New Zealand,
- 20 ECTS credits of studies conducted in English in a higher education institution in Finland,
- a Bachelor's or Master's degree in English in any EU, or ETA country, or in USA, Canada, Australia, or New Zealand,
- TOEFL (minimum 570 PBT / 88 IBT),
- IELTS (minimum 6.5), or
- Another means of demonstrating proficiency (e.g. the prospective supervisor's approval of the applicant's language ability).

3.2. Application process for admission

All applicants must complete an electronic application for admission to the UniOGS. Scanned electronic copies of required documents may be submitted with the application, but original documents (or notarized copies) must be provided before the admission process can be completed. The required documentation includes:

- a) Degree (or its equivalent) diploma
- b) Transcript of courses
- c) Proof of language skills (requirements stated above)
- d) Curriculum Vitae
- e) Doctoral student applicants entering the UniOGS *with no pre-selected Supervisor*, must submit a statement of research interest, or an outline of their prospective research plan, and a career plan. If applicable, the statement should also contain information on contacts that have been made by the student with a prospective supervisor (or supervisors) prior to the call deadline. For these students, final admission to the UniOGS is dependent upon the submission of an outline of the Doctoral Training Plan agreed upon with their Principal Supervisor (see f, below).
- f) Applicants who have *already taken contact with their Principal Supervisor* must submit an outline, or summary, of their Doctoral Training Plan (includes the Research, Study and Financial Plans) compatible with a four-year doctoral training period and that they have agreed upon with their Principal Supervisors (see [Section 4.3.1](#)).
- g) An explanation for choosing part-time status (*if applicable*).

- h) Two letters of recommendation from previous teachers or supervisors including their names, complete contact information, and their relationship with the applicant.
- i) A plan for financing the doctoral studies.

The four-year Study Rights periods officially start on 1st January and 1st August each year. Applications for admission are addressed to the UniOGS and may be submitted at any time. The deadlines for submission for the start of each Study Right period are October 30th (for a start on 1st January) and March 31st (for a start on 1st August).

3.3. Admission of students

The Doctoral Training Committees of the UniOGS will review the applications based on the submitted documents and any additional information (expert opinions, interviews as deemed appropriate), and will give a recommendation for admission to the Dean of the UniOGS. Recommendations may be for:

a) *Unconditional admission*

The appropriate Doctoral Training Committee will recommend admission with a four-year Study Rights period starting at the beginning of the next semester.

b) *Conditional admission*

The appropriate Doctoral Training Committee will recommend admission with an initial Study Rights period of one year. For the Study Rights to be continued, the student must complete the required background studies for the doctoral work (if gaps were identified) and a Principal Supervisor must have been appointed (if the student rotated through different labs during the first year). The Principal Supervisor's recommendation is a prerequisite for the continuation of the Study Rights to be granted.

The Dean of the UniOGS finally admits the students. The four-year Study Rights period will effectively start on the next official start date (1st January, or 1st August) following the Dean's decision to admit the student. Nevertheless, students may commence their doctoral training, with full rights, as soon as the Dean has approved their admission to UniOGS.

Following admission to the UniOGS as a doctoral student, each student will be assigned to a Doctoral Training Follow-up Group composed of professors, and senior and/or postdoctoral scientists (see [Section 4.2](#)).

3.4. Registration of new students

UniOGS must keep a full register of its students. Oodi is the official student register at the University of Oulu and will also be used in the UniOGS. All students will be registered in Oodi as soon as the Dean has approved their admission to the UniOGS; this registration gives the official status and rights for the students.

The UniOGS register will have updated information about its students, from the time they are admitted to the school, to when they graduate, or leave the school. Reasons and timing for leaving should be recorded. From Oodi, it is possible to find basic information about the students, their Study Rights, completed courses, etc. Official Study Credits are based solely on Oodi transcripts of records.

3.5. Extension of study rights

Supervisors and Doctoral Training Follow-up Groups should make sure that the doctoral training of each full-time student can be completed in four years. All students (including part-time students) will be granted Study Rights for a period of four years. In some cases, the Study Rights may be extended. Situations justifying an extension of the four-year Study Rights period include, for example:

- Students who are registered as part-time students and who can justify their status as such during the first four-year period,
- Maternity/paternity leave,
- Long sick leave,
- Military, or alternative service, or
- Other justified reasons.

In every case, the extension must be applied for from the relevant Doctoral Training Committee, which reviews each case according to its individual merits.

4 The Doctoral Training Process - Recommendations

These recommendations are made with a view to facilitating the completion of the doctoral degree within four years.

4.1 The student-supervisor relationship

All doctoral students must have a Principle Supervisor who is responsible for guiding the student through the whole doctoral training process (see [Figure 2](#)) and for encouraging the student to acquire the skills necessary for the development of a successful career. The Principal Supervisor may be assisted by one to two co-supervisors.

Emphasis should be placed on encouraging and maintaining high-quality student-supervisor relationships, and on ensuring high-quality supervision. To this end, pedagogic support in the form of supervisory training should be made available to all supervisors, and the overall quality of the supervision provided by each supervisor should be assessed regularly (e.g. every four years).

At registration, students will submit an outline of their [Doctoral Training Plan](#) compatible with a four-year doctoral training period and that they have agreed upon with their Principal Supervisors.

Following registration as a UniOGS doctoral student, each student will be assigned to a Doctoral Training Follow-up Group composed of professors, and senior and/or postdoctoral scientists. Follow-up Groups for students registered in National Doctoral Programmes (Academy-funded) with an established practice of Doctoral Training Follow-up Groups, may be proposed by the Doctoral Programme; these are subject to approval by the relevant UniOGS Doctoral Training Committee.

The responsibilities of the student and of the supervisor(s) with regards to the actual training and work processes, and the exploitation and dissemination of results, must be clearly defined.

Well-defined mechanisms should be put in place for resolving conflicts that may arise between students and their supervisors and which cannot be resolved by the student-supervisor pair alone.

Tutoring and mentoring should also be considered as a means of supporting students during the early stages of their doctoral training.

4.2 Doctoral training follow-up groups and reporting

At the end of the first year following registration in the UniOGS, the student must submit a Full Doctoral Training Plan (see [Section 4.3.1](#)) prior to the first meeting with the Doctoral Training Follow-up Group. Both the Research Plan and the Study Plan components of the Doctoral Training Plan may evolve as the training progresses, depending on the results of the research itself, and on the career development plans of the student.

In all cases, each student will meet with his/her Follow-up Group annually.

The roles of the Doctoral Training Follow-up Group would include:

- the evaluation of the progress of the doctoral training (including both research and studies) of the student,
- ensuring that the training is progressing according to schedule and under the best conditions possible,
- ensuring that the student is receiving adequate supervision,
- provide the student (and his/her Principal Supervisor) with constructive written feedback aiming, when necessary, to enhance and improve the doctoral training experience and its outcome, and
- ensure that the student reflects on the further development his/her post-doctoral career and takes the necessary steps at the appropriate time.

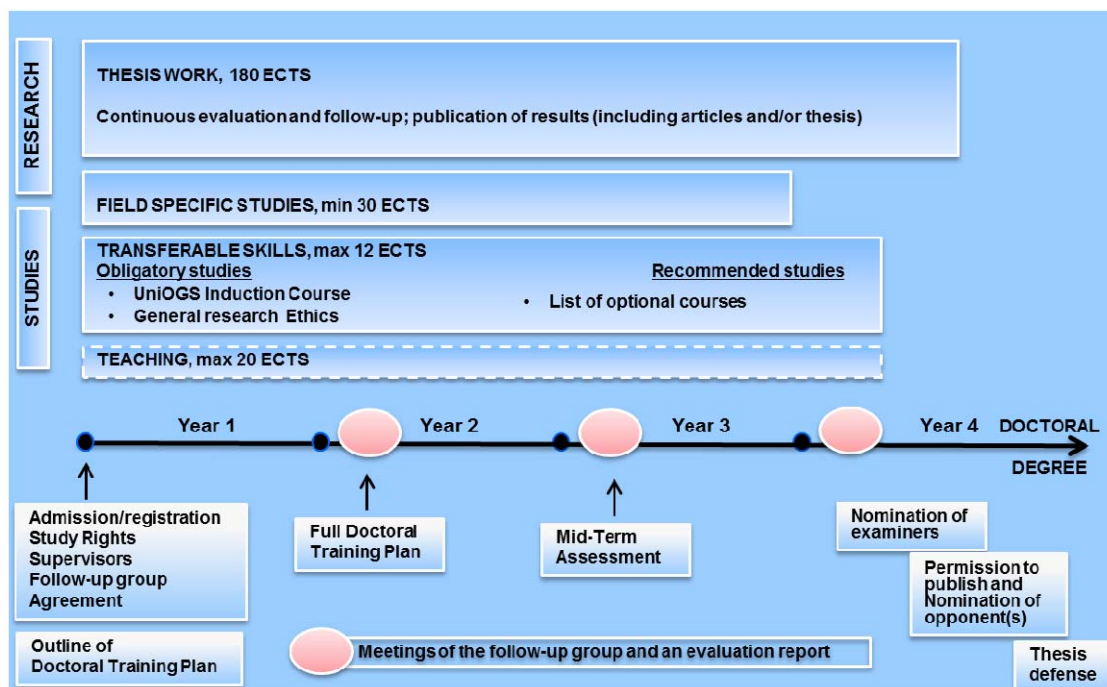
Furthermore, in order to prepare for the meetings with the Doctoral Training Follow-up Group, and to aid the latter in its evaluation of the student's progress, each student must submit a Research & Study Progress Report, together with an evaluation report from the Principal Supervisor, at the end of each 12-month period. The report from the Principal Supervisor should also include a brief assessment of the student's performance and further needs in the context of transferable skills and general education.

The second meeting with the Follow-up Group, marking the half-way point of the doctoral training, is particularly important. The progress of the research and studies will be closely evaluated relative to the two-year milestones announced in the Doctoral Training Plan ([see below](#)) and, if necessary, a re-assessment of the strategies and goals will be requested from the student and Principal Supervisor, so that the doctoral training can effectively be completed within the four-year limit (for full-time students). For part-time students, this evaluation will be made at the end of the third year.

After each meeting, the Doctoral Training Follow-up Group will prepare a report summarizing its evaluation of the student's progress and current status with respect to the goals and schedules announced in the Research and Study Plans. The report will be based on the written plans and reports of the student and his/her principal Supervisor, and on the Follow-up Group's discussion with the student at the meeting.

It has been proposed that the Doctoral Training Follow-up Group reports made after the meetings could also be used in the *"evaluation of personal performance"* and *"developmental discussions"* linked to the (YPJ) salary negotiations.

Figure 2: Recommended time-line for a four-year doctoral training programme.



4.3 Milestones for doctoral students

Milestones for doctoral students are defined by the students themselves in close cooperation with the Principal Supervisor. In the next chapter this process is introduced by discussing the Doctoral Training Plan.

4.3.1 Doctoral Training Plan for doctoral students (4 years, 240 ECTS)

Obtaining a doctoral degree in four years requires a well thought-out Doctoral Training Plan. Together, the research and study components of the training should aim to provide the students with a broad set of skills contributing to their future employment in academia, or in other sectors. Considering the four-year target for doctoral, focus must also be brought to bear on developing time-management skills, which become crucial for the successful completion of the degree.

4.3.2 The aim and importance of planning

Every student is expected to write a **Doctoral Training Plan**, which includes the most important phases of his/her research and studies. The Doctoral Training Plan will include both a Research Plan, a Study Plan and a Financial Plan, clearly showing the principal milestones that must be reached for the successful and timely completion of both the (course) studies and the research project (see [Table 1](#)). The resulting document can be employed both as a valuable work guide, but also as the basis of progress assessment.

An outline, or abstract, of the plan must be submitted before final admission into the UniOGS. A detailed plan must be submitted before the first Doctoral Training Follow-up Group meeting.

Table 1: Table summarizing the principal milestones in a Doctoral Training Plan

		YEAR 1		YEAR 2		YEAR 3		YEAR 4		
		H1	H2	H1	H2	H1	H2	H1	H2	
Studies (study plan in appendix)										
Support activities (incl. conferences, seminars, mobility,...) ~20% total credits										
Field-specific studies, ~60% total credits										
Transferable skills and General Education courses, up to 20% total credits										
Credits in total	60									
		YEAR 1		YEAR 2		YEAR 3		YEAR 4		
		H1	H2	H1	H2	H1	H2	H1	H2	
Thesis work (research plan in appendix)										
Research plan										
Oral presentation of research plan										
<i>Theoretical frame</i>										
<i>Research material + Data collection</i>										
Analysis and reporting the results										
Manuscript finalization and discussion										
Pre-examination *E										
Public defense *O										
Mobility plan (in appendix)										
Credits in total	180									

*E=Pre-examiners defined (date), O=Opponents defined (+date for defense), M=Manuscript (M1, M2..), S=Submitted (S1, S2..), A=Accepted (A1, A2..), P=Published articles (P1, P2..)

4.3.3 Research, study and financial plans

The Doctoral Training Plan should be concise, but should cover the whole period of doctoral training, even if, as in the case of part-time students, it is planned to take longer than the four years for which the student has been awarded his/her Study Rights. It should include the most important facts concerning the Research Plan, the Study Plan and the Financial Plan.

The Research Plan should contain a description of the scientific background, a development of the research questions, the approaches and methods that will be employed to answer those questions, expected outcomes, a publication plan (published articles and/or type of thesis), and a schedule. It is highly recommended that each student participates in a *research plan seminar*, where he/she will present his/her research plan to, and discuss it with, other doctoral students and/or supervisors.

The Study Plan should be created on the basis of the student's needs relative to his/her thesis work and future career development plans. The Principal Supervisor should play an active advisory role in the selection of useful and relevant courses. In the case where the student is registered in a structured Doctoral Programme (e.g. funded by the MinEdu/Academy of Finland), the Study Plan should also take into account the requirements, or recommendations, of the Doctoral Programme. Scientific visits to other laboratories elsewhere in Finland and/or abroad that are required for the thesis work (e.g. to perform parts of the work not feasible/possible to do at the University of Oulu) are encouraged. The timing of the courses and visits should also be carefully considered so that they truly support the research training process.

The Doctoral Training Plan must also include a **Financial Plan** for the period of doctoral work. This will include, at least, the planned source(s) of salary/grants for the student during the doctoral training period. Other costs, such as those for consumables, services, databases and access to necessary equipment and infrastructures, should also be taken into account in the Financial Plan.

5 Requirements for a Doctoral Degree - Recommendations

The overall opinion of the UniOGS Working Group is that the requirements for a “*compilation-based*” thesis of three (or more) publications and 60 Study Credits currently enforced in many disciplines at the University of Oulu are not realistically compatible with the imposition of a four-year limit on doctoral training. Hence, further consideration should be given to the practices regarding the number of publications and the necessary Study Credit units when UniOGS starts its activities.

5.1 Type of the dissertation

Current laws in Finland allow for a significant amount of flexibility in determining the requirements that must be met in order to obtain a doctoral degree. These include a collection of essays, a monograph, or a compilation-based thesis including one or more published original articles. The common factor is that the work should demonstrate that the student has been able to conduct original research, making a significant contribution to knowledge in the field of research. In other words, “*quality counts*”.

The formats currently practiced, or imposed, in different Finnish Universities, and even among different Faculties within a same University, tend to be discipline-specific; i.e. they reflect the nature of the discipline and what everybody else is doing in the discipline.

The UniOGS Planning Committee tends to favour a format whereby the requirements would be dependent upon the discipline in which the thesis work was carried out. In the case where a discipline adopts the format of a compilation-based thesis, it is important that at least the numerical requirements be harmonized across the University. **One publication in a high-level journal in the relevant field of research**, reflecting the high quality of the work, was proposed by the UniOGS Planning Committee as a minimum requirement for a compilation thesis. It was

recommended that the examination of the thesis be carried out by external reviewers with no direct collaborative ties to the research presented in the thesis.

Since UniOGS aims for the **harmonization of processes across the University**, thereby enhancing the possibility for a student to undertake a true cross-disciplinary, or trans-sectoral doctoral training, it is important that “discipline-dependent formats” for the doctoral theses do not compromise the possibility of inter-disciplinary doctoral training.

5.2 Definition of the number of study credits required for the doctoral degree

Although a requirement for 60 Study Credits was found to be high in the context of a four-year training programme, the UniOGS Working Group decided to maintain this level, at least for the near future.

In all cases, **field/discipline-related activities** (excluding teaching and generic studies) should account for **at least 50%** of the total study credits. These are defined as activities that contribute to increasing and/or deepening the knowledge-base and skills of the doctoral student in the field, or discipline(s), of his/her own research project, as defined in the Research Plan.

Support activities directly related to research, such as attending and/or organizing conferences, seminars, journal clubs, professional networking events, giving poster and/or oral presentations of the students’ own research, coauthoring articles that are not included in the student’s own thesis, and mobility, particularly international research visits, are to be strongly encouraged. Depending on the nature of the activity, and the type and duration of the mobility, these activities can be sources of significant amounts of study credits; these need to be clearly defined at the level of the UniOGS, and applied for all doctoral students.

A **maximum of 20%** of the total study credits can be acquired through attending **General Education and Transferable Skills Courses** (see below).

Students may be required to undertake some teaching activities within their Departments. According to the University’s Collective Agreement 2010-2013, full-time students may be required to teach up to 56 hours/year during their doctoral training, without additional indemnity. It was proposed that, in view of the importance of teaching experience to the career development of all researchers, doctoral students should be allowed to acquire **up to 20 Study Credits** (maximum) for contributions to teaching (one study credit/10 hours teaching). However, this is not a mandatory requirement.

In order to maintain the possibility of participating in International Joint Doctorate Programmes (e.g. Erasmus Mundus Joint Doctorates), it is important to maintain, or allow for, a reasonable degree of flexibility with regards to the number of Study Credits required and/or how the students can acquire them.

5.3 General education and transferable skills curriculum

Doctoral training within a university graduate school aims to provide young scientists with the tools necessary to develop a successful career either in academia, or in other sectors. Students graduating from doctoral programmes of the UniOGS should have gained an excellent capacity for critical and creative thinking, a strong motivation for discovery-driven research, and a sufficiently large repertoire of both field-specific and general skills and knowledge that will allow them to operate in research, education and administration in a global environment.

In view of the research focus of the University of Oulu, the UniOGS Working Group has made a ranked proposal for topics that should be made available to the students of the UniOGS under the label of **General Education and Transferable Skills** (see [Table 2](#)).

Table 2: Ranked proposal for topics that should be made available to the students of the UniOGS under the label of General Education and Transferable Skills

Obligatory Courses	Strongly Recommended	Recommended
UniOGS Induction course	Writing skills	Teaching skills (university pedagogies)
General research ethics	Presentation skills	Learning skills
	General research methods	Communicating with the general public and media
	Managing research projects	Patent information
	Career development (post-doc)	IPR in research
	Information management	Commercial exploitation of scientific research
	Cross-disciplinary and cross-cultural skills	

In order to facilitate the successful integration of all students into their doctoral training, and into the UniOGS environment in general, the UniOGS Working Group recommends two courses that must be followed by all students during the first 12 months following their registration in the UniOGS:

- a **UniOGS Induction Course** whose aim is to provide new students with information about the structure and practices of UniOGS, as well as practical information regarding the services, formalities and general requirements essential to both their doctoral studies and every-day life. This information should also be made available on the UniOGS web pages (updated in “real-time”) and in the form of a hand-book (updated annually).
- a **General Research Ethics** course organized by UniOGS. Alternatively, students must be able to demonstrate that they have recently followed a similar course in another higher education establishment in Finland.

All other courses aiming to provide **general education** and/or **transferable skills** should be attended **if and when needed** by the student. Doctoral programmes operating within the UniOGS should develop an inventory of transferable skills and general knowledge which their graduates must possess for a successful career, and ensure that their students have acquired them by the end of their doctoral studies. Weaknesses and strengths in key skills and knowledge should be evaluated and reported at the beginning of the doctoral training, and re-assessed at the annual doctoral training Follow-up Group meetings.

Doctoral Programmes may also specify courses that their students are required to attend. In particular, they should indicate whether students must attend more field-focused ethics courses, such as those related to animal experimentation and studies using Human subjects.

Students may choose any general education and transferable skills courses that they feel are needed. However, study credits acquired through attendance of general education and transferable skills courses may only be counted up to a maximum of 20% of the total study credits required for the doctoral degree (excluding those given for the research work, publications and the thesis itself).

Detailed Study Plans for the completion of courses, including those related to general education and transferable skills, should be presented with the students' full Doctoral Training Plan (see [Section 4.3.1](#)). The tracking of the courses attended by students should be done through Oodi.

As recommended in the **report by the Transferable Skills Workgroup** (see [Appendix 1](#)), UniOGS should make it a priority to:

- develop a *best practices* document for all students relating to transferable skills.
- develop the two obligatory *General Education and Transferable Skills* courses (see [Table 2](#)),
- make use of existing *General Education and Transferable Skills* courses to meet the demand for highly recommended and recommended courses, and
- develop new courses aiming to fill gaps in the current course offering.

6 Conclusion

This report provides guidelines for the structure and operations of the UniOGS that should allow the completion of a high-quality doctoral degree within four years. Many of the recommendations have been made in such a fashion that the practical implementation of the plans, particularly in the early stage, is not obstructed by strict regulations. Several important elements, such as the publication and Study Credit requirements for obtaining a doctoral degree, have been left open intentionally, and will be re-evaluated at a later date.

7 Signatures

Oulu, 20 May 2011

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