



# STRUCTURES OF DOCTORAL EDUCATION AT THE UNIVERSITY OF HELSINKI

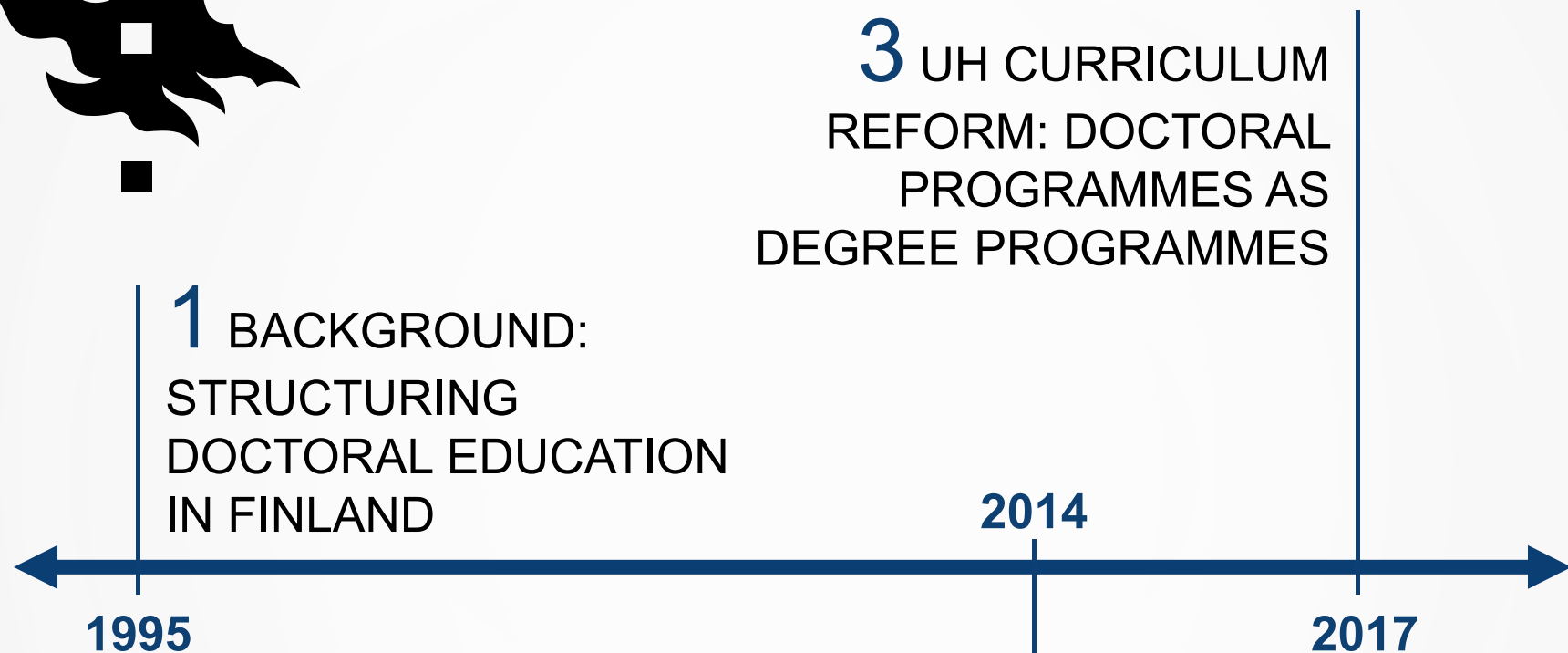
**Workshop on Doctoral Studies**

University of Tartu

20 April 2018

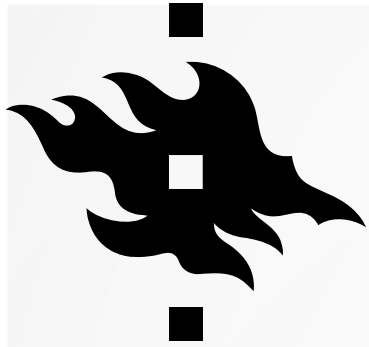
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HELSINGFORS UNIVERSITET  
UNIVERSITY OF HELSINKI

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2 UH STRUCTURAL  
REFORM: THE MATRIX OF  
FOUR DOCTORAL SCHOOLS

*! Feedback from the international  
evaluation of the 2014 reform and  
current structures*



# BACKGROUND: STRUCTURING DOCTORAL EDUCATION IN FINLAND, 1995-2013

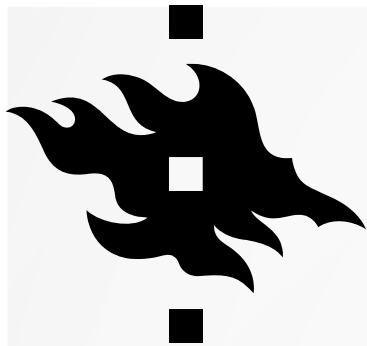
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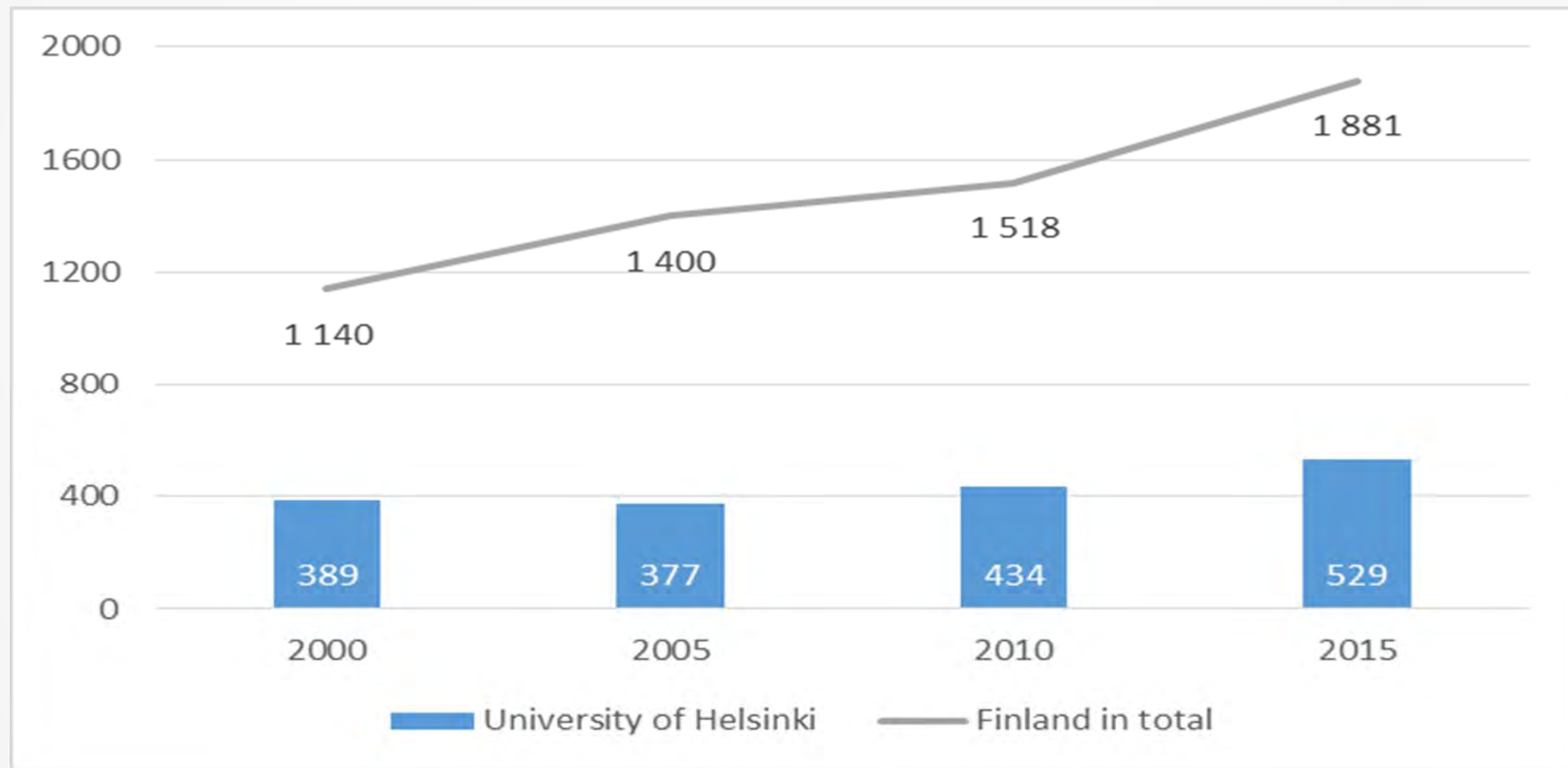


# THE NATIONAL GRADUATE SCHOOL SYSTEM

- established in 1995
- funded by the Ministry of Education and Culture, administered by the Academy of Finland
- competitive funding for select graduate schools (doctoral programmes)
- most graduate schools / doctoral programmes network-type joint programmes with several universities
- focus on funded positions & high-quality training for top doctoral candidates



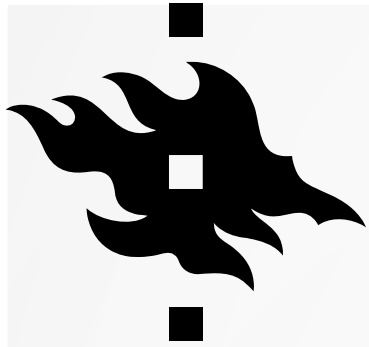
# DOCTORAL DEGREES 2000-2015





# CALLS FOR CHANGE

- evaluations of the grad school system in 2006, 2011
- improvements in overall quality assurance, transparency & consistency
- stronger strategic guidance & academic leadership needed by the universities
  - university-wide graduate school(s), divided into doctoral programmes
  - transfer of funding to the universities' basic funding



# UH STRUCTURAL REFORM: ESTABLISHING THE MATRIX OF FOUR DOCTORAL SCHOOLS, 2014

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# OBJECTIVES & KEY PRINCIPLES OF THE REFORM

- Improving the conditions for developing the **quality and consistency** of doctoral education and supervision of doctoral candidates  
-> training and supervision guaranteed for all doctoral candidates equally
- Developing **research- and researcher-oriented** doctoral education in **interdisciplinary and multidisciplinary** doctoral programmes based on a solid educational tradition and academic foundation
- Establishing support for the development and sharing of **good practices** in research communities
- **Raising the profile** of doctoral education at the University of Helsinki and enhancing its visibility in Finland and abroad.

# THE UNIVERSITY IN BRIEF



ESTABLISHED



MEUR BUDGET



EDUCATIONAL  
PROGRAMMES



DEGREES AWARDED  
ANNUALLY



DOCTORAL  
DEGREES



STAFF



DEGREE  
STUDENTS



STUDENTS  
IN OPEN AND  
CONTINUING  
EDUCATION



ALUMNI  
THROUGHOUT  
THE WORLD



DOCTORAL  
CANDIDATES

UNIVERSITY OF HELSINKI

# 4 CAMPUSES 11 FACULTIES

## CITY CENTRE CAMPUS

**21,000 STUDENTS**  
**HUMANITIES AND SOCIAL SCIENCES**

FACULTY OF ARTS  
FACULTY OF BEHAVIOURAL SCIENCES  
FACULTY OF LAW  
FACULTY OF THEOLOGY  
FACULTY OF SOCIAL SCIENCES

## KUMPULA CAMPUS

**6,000 STUDENTS**  
**THE LARGEST SCIENCE HUB IN THE NORDIC COUNTRIES**

FACULTY OF SCIENCE

## MEILAHTI CAMPUS

**3,000 STUDENTS**  
**TOP-LEVEL RESEARCH IN MEDICINE**

FACULTY OF MEDICINE

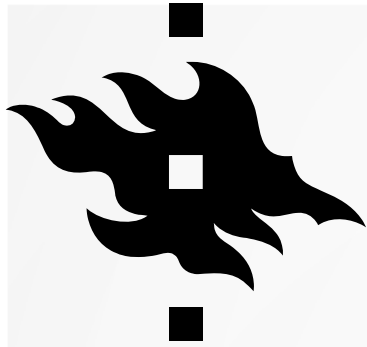
## VIIKKI CAMPUS

**6,500 STUDENTS**  
**TOP-LEVEL RESEARCH IN THE BIOSCIENCES**

FACULTY OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES  
FACULTY OF VETERINARY MEDICINE  
FACULTY OF PHARMACY  
FACULTY OF AGRICULTURE AND FORESTRY



UNIVERSITY OF HELSINKI



# ORGANISATIONAL STRUCTURE OF DOCTORAL EDUCATION

AS OF 1.1.2014

## 4 Doctoral Schools

Humanities and Social Sciences  
Health Sciences  
Environmental, Food and Biological Sciences  
Natural Sciences

- consisting of **32 Doctoral Programmes**
- distributed across **11 Faculties**



## DOCTORAL SCHOOL IN ENVIRONMENTAL, FOOD AND BIOLOGICAL SCIENCES

6 doctoral programmes



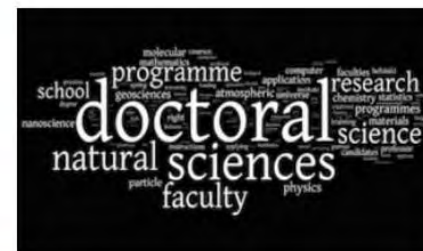
## DOCTORAL SCHOOL IN HEALTH SCIENCES

8 doctoral programmes



## DOCTORAL SCHOOL IN HUMANITIES AND SOCIAL SCIENCES

11 doctoral programmes



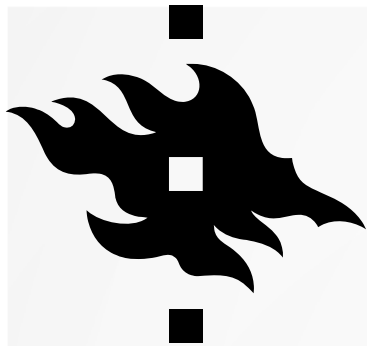
## DOCTORAL SCHOOL IN NATURAL SCIENCES

7 doctoral programmes

- 
- DP in Food Chain and Health
  - DP in Interdisciplinary Environmental Sciences
  - DP in Microbiology and Biotechnology
  - DP in Plant Sciences
  - DP in Sustainable Use of Renewable Natural Resources
  - DP in Wildlife Biology
  - DP in Biomedicine
  - DP in Brain and Mind
  - DP in Clinical Research
  - DP in Clinical Veterinary Medicine
  - DP in Drug Research
  - DP in Integrative Life Science
  - DP in Oral Sciences
  - DP in Population Health
  - DP in Economics
  - DP in Gender, Culture and Society
  - DP in History and Cultural Heritage
  - DP in Language Studies
  - DP in Law
  - DP in Philosophy, Arts and Society
  - DP in Political, Societal and Regional Changes
  - DP in Psychology, Learning and Communication
  - DP in School, Education, Society and Culture
  - DP in Social Sciences
  - DP in Theology and Religious Studies
  - DP in Atmospheric Sciences
  - DP in Chemistry and Molecular Sciences
  - DP in Computer Science
  - DP in Geosciences
  - DP in Materials Research and Nanoscience
  - DP in Mathematics and Statistics
  - DP in Particle Physics and Universe Sciences
-

# RESPONSIBILITIES

Unit	Responsibilities	Decision-making bodies
Faculties	Quality of degrees: <ul style="list-style-type: none"><li>- granting of the right to pursue a doctoral degree</li><li>- formal decisions on curricula</li><li>- examination of doctoral dissertations</li><li>- conferring of the degree</li></ul>	<ul style="list-style-type: none"><li>- Faculty Council</li><li>- Dean, Vice-Dean(s)</li></ul>
Doctoral Programmes	Quality of education: <ul style="list-style-type: none"><li>- assessment of doctoral applications</li><li>- planning &amp; implementation of doctoral education</li><li>- progress monitoring</li></ul>	<ul style="list-style-type: none"><li>- Board</li><li>- Director</li></ul>
Doctoral Schools	Coordination: <ul style="list-style-type: none"><li>- good practices</li><li>- funding allocations</li></ul>	<ul style="list-style-type: none"><li>- Board</li><li>- Director</li></ul>



# THE MATRIX STRUCTURE

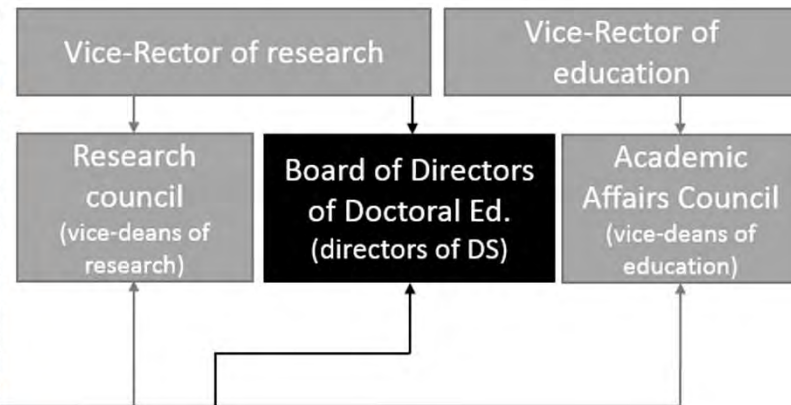
Number of Faculty's doctoral candidates per doctoral programmes in a Doctoral School

## Strategic planning and resource allocation

### Duties of Faculties and Doctoral Programmes:

- admission of doctoral candidates (study rights)
- design of curriculum and teaching programme
- follow-up of studies
- thesis supervision
- examination of dissertations
- awarding of degrees

	Theology	Law	Arts	Social Sc.	Educational Sc.	Medicine	Pharmacy	Vet. Med.	Agriculture	Biol. & Env. Sc.	Natural Sc.	
2352 11	197 4	288 2	727 8	623 5	370 4	109 2			15 2	2 1	21 3	HYMY <sup>1)</sup>
1516 8					1 1	1065 7	142 5	92 3	15 3	200 4	1 1	DSHealth <sup>2)</sup>
600 6			4 1	4 1		5 1		41 2	318 6	210 5	17 2	YEB <sup>3)</sup>
529 7			3 1				9 2		12 1	2 1	503 7	DoNaSci <sup>4)</sup>
	197 4	288 2	734 10	628 6	371 5	1179 10	151 7	133 11	360 12	414 11	542 13	



### Duties of Doctoral Schools:

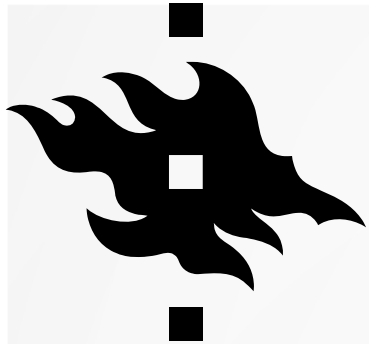
- allocation of DE-marked funding
- general and transf. skills courses
- support and development of supervision
- coordination of cooperation and best practices

<sup>1)</sup> DS in Humanities and Social Sciences

<sup>2)</sup> DS in Health Sciences

<sup>3)</sup> DS in Environmental, Food and Biological Sciences

<sup>4)</sup> DS in Natural Sciences



*! Feedback from the evaluation: more clarity to the roles and responsibilities ... within the current structure of four doctoral schools*

research environment

### Faculty

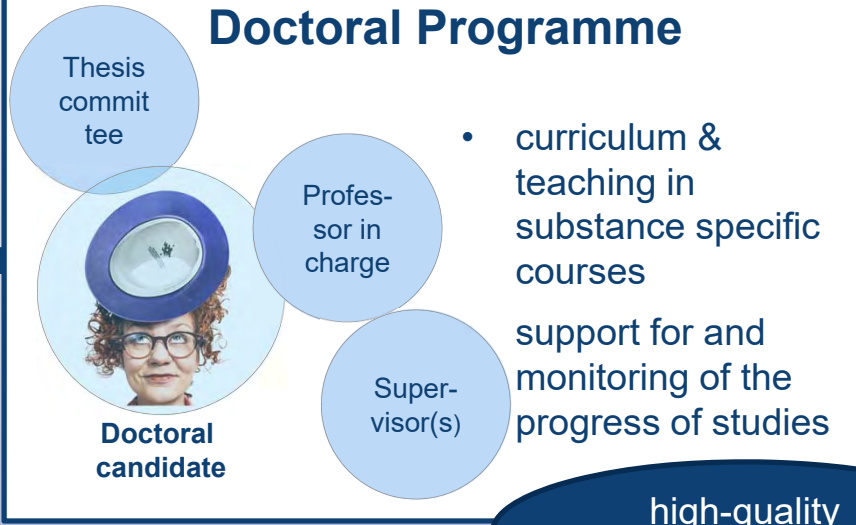
- granting of a right to study for a doctoral degree
- examination of dissertations
- awarding of the doctoral degree

### Doctoral School

- teaching in general and transferable skills
- allocations for funding (salaried positions, travel grants, dissertation completion grants)
- coordination of best practices

quality assurance

### Doctoral Programme



- curriculum & teaching in substance specific courses
- support for and monitoring of the progress of studies

high-quality training experience



# FUNDING OF DOCTORAL CANDIDATES

- **UH doctoral fellowships**
  - 78 full-time four-year positions starting annually
  - a total of 310 positions
  - employment contracts
- **doctoral candidate positions in research groups**
  - funded by competitive external funding
  - some 1200 positions overall in 2017
- **grants by private foundations**
  - a major source of funding, part-time/full-time
  - student-status + a grant-holder's agreement
- **self-funded doctoral candidates**
  - student-status, often part-time

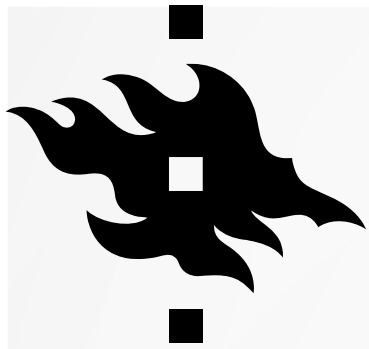
= 1/3 of all  
(2/3 of full-time)  
doctoral candidates

*! Feedback from the evaluation: the decisions on fellowships could be more strategic; all doctoral candidates should be treated equally regardless of funding*



# RIGHTS AND RESPONSIBILITIES DEPENDENT ON FUNDING SOURCE

- **study right** equals certain rights and obligations for all doctoral candidates
  - same for everyone regardless of funding
  - rights include e.g. supervision & teaching, doctoral school travel grants, IT & library services, discount rates for Unicafe & Unisport
  - however, in laboratory fields facilities, equipment and other resources are readily available for all group members
- **employment contract** (UH fellowships, employment by research projects) entail additional rights
  - rights include e.g. office space & tools, occupational health services, staff development & training



# UH CURRICULUM REFORM: TRANSFORMING THE DOCTORAL PROGRAMMES INTO DEGREE PROGRAMMES, 2017

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# THE BIG WHEEL REFORM

- best students for the programmes - best degrees
- internationally attractive and competitive degree programmes

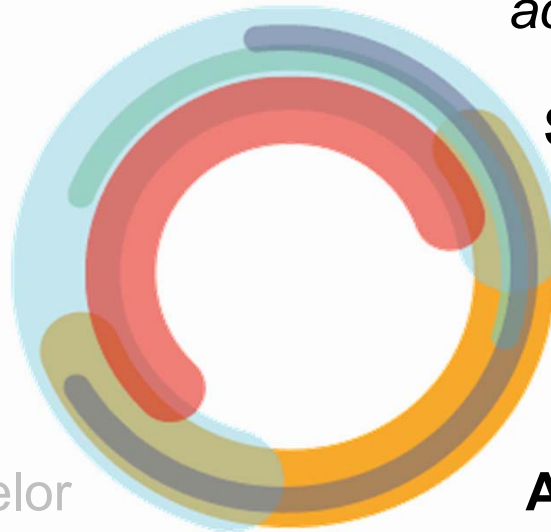
A GENUINE THREE-TIER STRUCTURE

High-quality PhDs

Independent  
Masters

Broader Bachelor  
Curricula

Number of Bachelor  
Programmes



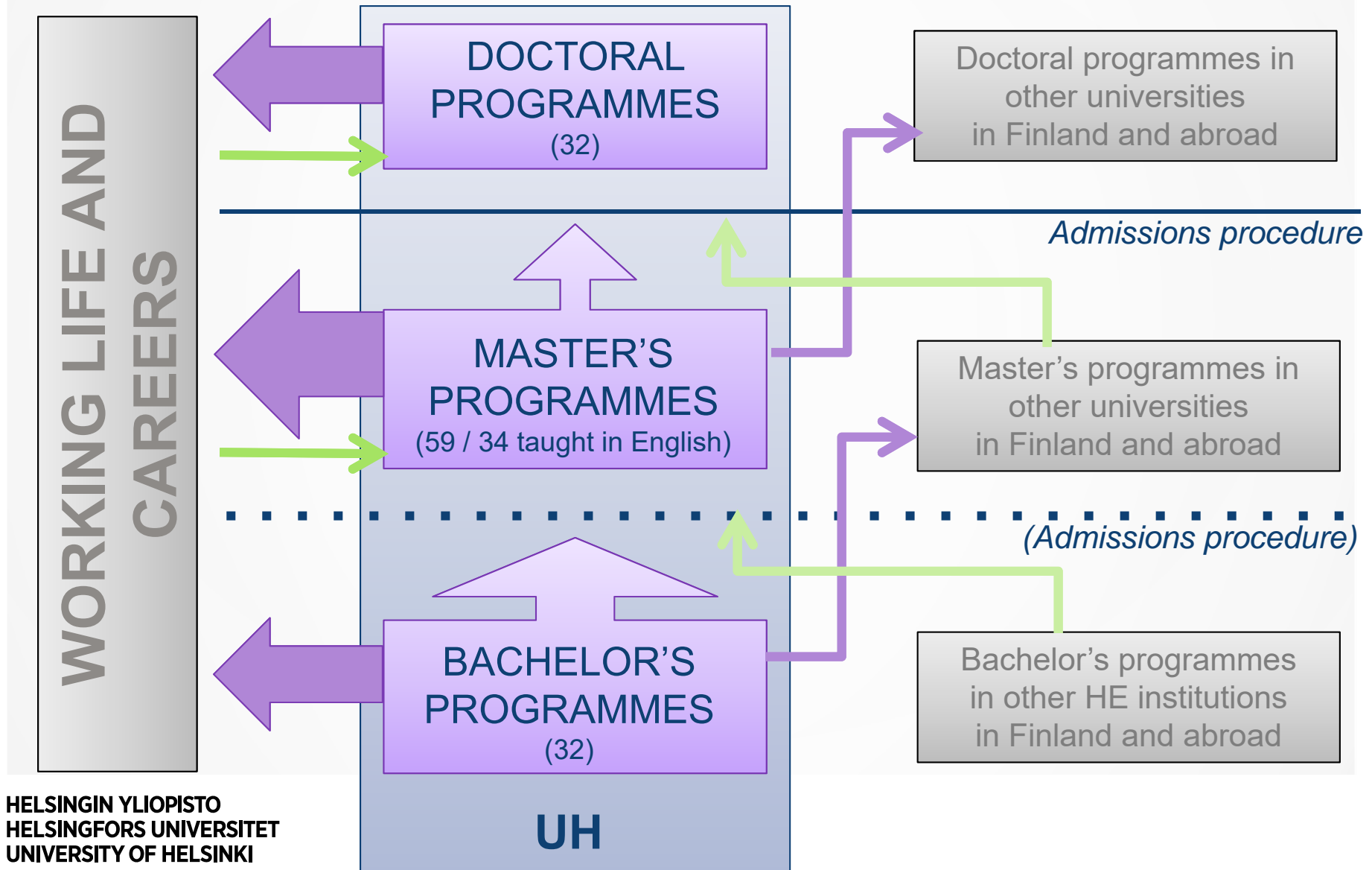
**Employability:**  
*academic/non-academic*

**Supervision & follow-up:**  
*quality & procedures*

**Learning Outcomes:**  
*knowledge & skills*

**Admissions:**  
*quality & numbers*

# A GENUINE THREE-TIER STRUCTURE





# DOCTORAL PROGRAMMES AS DEGREE PROGRAMMES

## 1. Procedures for admissions

- aiming at more coherent and transparent admission policy
- University-level application guidelines, common application periods & electronic application form, formal language requirements

## 2. Curriculum design

- aiming at more structure & improved career development opportunities
- 30 ECTS discipline specific studies + 10 ECTS transferable skills studies

## 3. Supervision and monitoring

- aiming at increased institutional responsibility
- common guidelines on supervision, thesis committees and annual monitoring of thesis work and doctoral studies

## 4. Examination of dissertations

- aiming at increased transparency and coherence in procedures across faculties
- common criteria for the impartiality of examiners





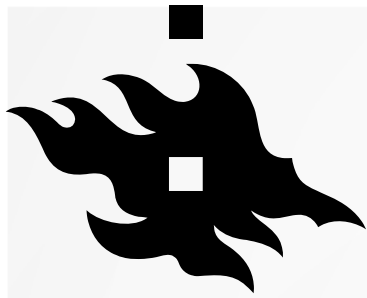
# ADMISSIONS

- uniform, transparent procedures across the 32 DPs and 11 Faculties
- University-level guidelines
  - 2-4 admission periods per year
  - formal language requirements
  - limited intake
  - evaluation of applications in doctoral programmes
- coordination of procedures for admissions and employment contracts
  - LEAN pilot project across different sectors of University Services



*! Feedback from the evaluation: "We were pleased to see that there is more consistency in the processes now through a common set of regulations. We would like guidelines for processes also to be more consistent while allowing for disciplinary traditions."*

# CURRICULUM STRUCTURE

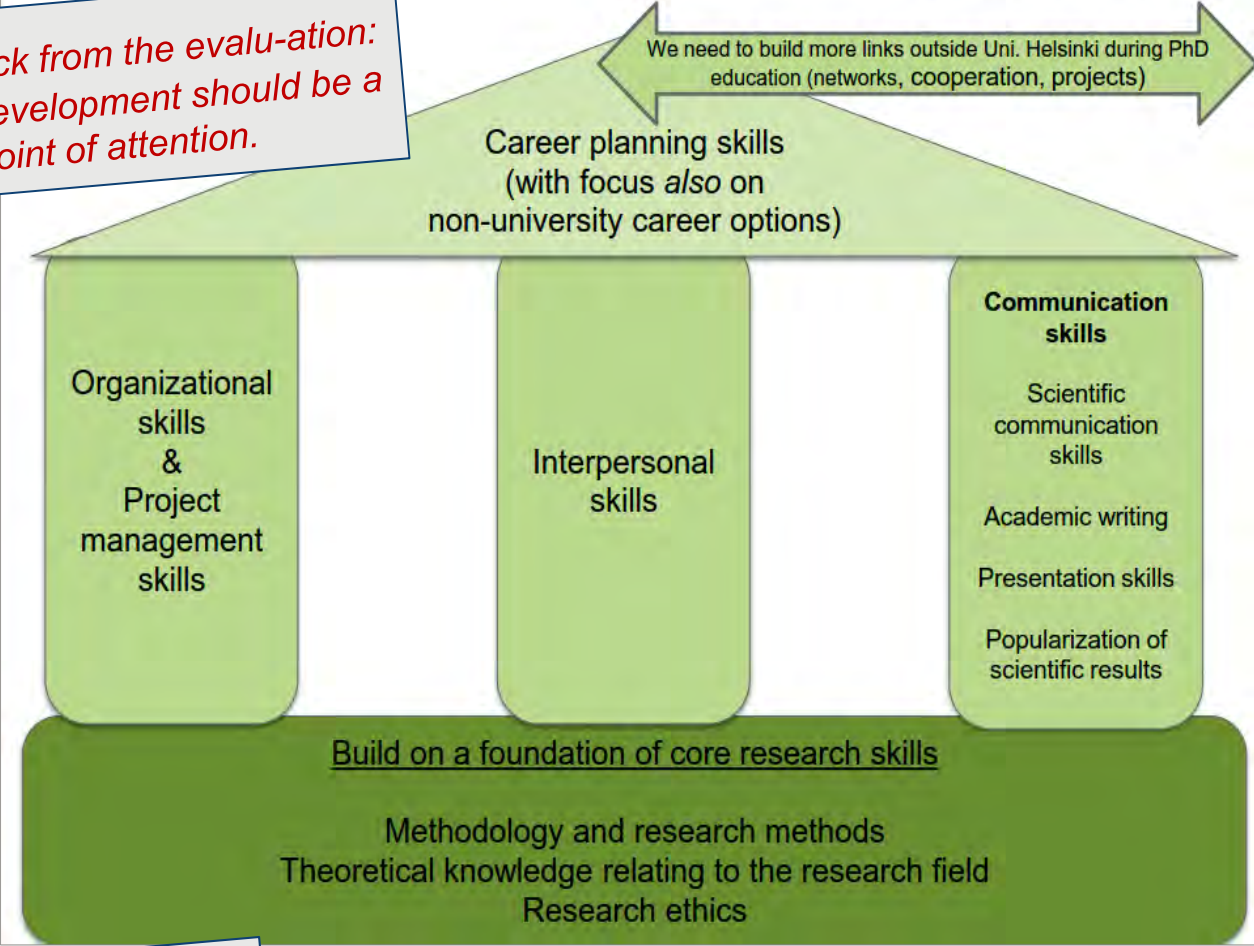


Eric Carver, Uni Helsinki Career Services, LATUA-project

*! Feedback from the evaluation: Career development should be a special point of attention.*

10 op

30 op



*! Feedback from the evaluation: "From an international perspective, this is a considerable number of credits..."*

Dissertation research



# SUPERVISION & DIGITAL PROGRESS MONITORING



- supervision plan/agreement
- annual progress reports by the doctoral candidates
- feedback from the thesis committee
- comprehensive reports for the DP board

The screenshot shows the Thessa system interface. At the top, there are navigation links: Thessa, My PhD project, Reminders, Profile, Help, and a Log out button. The main content area is titled "Supervision plans" and states "There are no supervision plans so far." Below this, a text block explains that a supervision plan is an agreement between a doctoral candidate and supervisors. On the left side, there is a "Reporting" section with a summary: 8 doctoral candidates' report is late (67%), 2 doctoral candidates' latest report has not yet been accepted (17%), and 2 doctoral candidates are on time (17%). Below the summary is a table with columns for Status, Doctoral candidate, and Doctoral programme.

Status	Doctoral candidate	Doctoral programme
🔴	Aapeli Mötikäinen (dc)	computer science
🔴	Sebastian Tebastian	particle physics and universe scienc...
🔴	Satuhelina Lirumlaarum	mathematics and statistics
🔴	Risto Reipas	chemistry and molecular sciences
🔴	Ornelius Strömmersön	computer science
🔴	Nikopetteri Knattartton	materials research and nanoscience
🔴	Heikki Duffelsson	computer science
🔴	Ulla-Majja Diipadaapanen	materials research and nanoscience
🟡	Emmaljunga Österdöttir	atmospheric sciences
🟡	Judah Ritchie	computer science
🟢	Minna Mönninen	atmospheric sciences
🟢	Dummy LDAP First Name Dummy L...	atmospheric sciences

Below the table, there are sections for "My PhD project" with buttons to add publications, international activities, and funding. There are also sections for "Courses" and "Teaching". A callout box is overlaid on the bottom right of the screenshot.

**! Feedback from the evaluation: Create opportunities for professional development of supervisors; establish procedures for conflict resolution (e.g. ombudsman)**



# GUIDELINES FOR DISSERTATIONS

A doctoral dissertation must consist of **peer-reviewed scholarly publications or manuscripts accepted for publication**, as well as a summarising report on the said documents (an article-based dissertation); or it must be a scholarly work in the name of the doctoral candidate alone and based on previously unpublished research results (**a monograph**). The doctoral dissertation may also take the form of **another work** that meets the appropriate scientific criteria, provided that the doctoral candidate's independent contribution to it can be verified.

Article-based dissertations **may include co-authored publications.**



# ARTICLE-BASED DISSERTATIONS



- A doctoral dissertation may include not only articles that have been previously published or accepted for publication, but **also articles that have not yet been accepted for publication.**
- The number of articles may vary between disciplines, but the number must be determined by taking into account the equal treatment of doctoral students and the target duration of four years for completing the degree. **Typically**, the number of articles ranges **from three to five.**

*! Feedback from the evaluation: "Criteria for the quality of doctoral dissertation are discipline-based and must be defined by the community of researchers within each discipline. Problems appear when doctoral programmes cut across different faculties that might have different criteria."*



# NOW IN THE PIPELINE: QUALITY ASSURANCE

“Quality assurance (QA) of doctoral education is rather complex but a crucial part of maintaining a quality culture. The assessment of the quality of doctoral training is linked to the assessment of research quality that is based on peer review and sensitive to disciplinary differences. QA also covers a range of processes, procedures and indicators that need to be developed by each university according to its institutional mission, strategies and priorities.”

LERU recommendations:

1. Have clear expectations and principles
2. **Maintain regular and independent scrutiny processes**
3. **Decide on and measure key indicators**
4. Include regular feedback from all actors and promote enhancement processes on the basis of feedback

*! Feedback from the evaluation !*

**THANK YOU**



**UNIVERSITY OF HELSINKI**