

HUMAN RESOURCES PLAN 2013-2016

One of the strategic goals for this planning period is an inspiring and thriving community. The careful planning of human resources is to be developed. A staff plan will be drawn up at the department to be followed and revised annually or when the need arises. This plan presents the premises for the human resources plan: the duties of the department, the staff structure. Then we will describe the outlines and goals for improving the staff structure. Finally, the improvements to be implemented during the planning period and the resources needed for strategic projects will be listed. The attachments will contain more details on the department staff structure per sub-programme and statistics on the staff structure etc.

1. Baselines for the HR plan

The background for the HR plan includes the department's strategic choices, the staff policy of the University of Helsinki, the department's own staff policy, and the financial parameters of the department. The staff policy details what kind of staff structure will promote the objectives of the department.

The structural basis for the department staff plan is built on the specialisation programmes of the teaching and research at the department, combined with the supporting administrative services. The planning and its financial conditions are examined annually during the planning period, as well as during the restructuring of duties. The examination of the plan is also necessary due to the reformations being carried out at the department, the more detailed specification of the university's staff policy, and the influence of the new university legislation and changing financing structures.

1.1. Department mission

The missions of the department have been described in its Quality Manual (the chapter Strategic premises and operational goals):

- *Teaching*: the department offers a broad basic scientific education for the Bachelor's degree, expert instruction based on its key research areas for the Master's degree, and a scientist's education based on its key areas for the Doctoral degree. The instruction follows a high standard.
- *Research*: the department carries out international cutting-edge research in its focus areas along with quality research into new domains.

- *Societal interaction*: the department is active in its interaction with the rest of society, both through its research and its teaching.

From autumn 2008, the key areas of teaching and research at the department, as well as the sub-programmes for the Master's degree, are *algorithms and machine learning*, *networking and services*, and *software systems*. In addition, there is a *Master's programme in bioinformatics* at the department.

For carrying out its basic duties, the department has an expenses allocation awarded by the faculty, as well as separate project funding, a considerable part of which is directed to the graduate school administered by the department (Hecse). In addition, the department receives a great deal of external funding for research projects, and some smaller stipends of separate funding. This staff plan only details the human-resource structure as far as the staff employed with the basic allocation is concerned. The heads of research units and projects are in charge of the HR plans for their own units.

1.2. Current staff structure

Staff employed with allocated funds on 1 February 2013

Teaching and research staff

- Ten appointed professors (Jacuccci, Kangasharju, Kivinen, Myllymäki, Mäkinen, Männistö, Paakki, Tarkoma, Toivonen, Ukkonen)
- Three acting professors (FiDiPro Münch until 31 Dec 2014, Puustjärvi until 31 July 2013, Asokan until 31 July 2014)
- One associate professor (Koivisto on leave of absence as Academy research fellow until 31 Aug 2013)
- One associate professorship to be filled
- One personal pooled professorship (5-year term until 31 May 2013, Hyvärinen, invitation procedure on-going)
- 15.5 permanent lecturers/university lecturers (Floréen mainly other funding, Hyvärinen on leave of absence until 31 May 2013, Karvi, Kurhila head of studies, Kutvonen, Laakso, Luukkainen, Pasanen, Tuovinen, Kerola, Kojo, Laine, Lokki, Nurmi, Vihavainen 50%, Wikla)
- One acting university lecturer (Ruohomaa until 31 July 2013)
- One vacant university lectureship (computational data analysis)
- One research coordinator (Moen)
- One appointed university instructor (Niklander)
- Three fixed-term doctoral students (Pervilä until 31 July 2013, Apiola until 31 March 2013, Ruokolainen until 30 June 2013)
- Two fixed-term research assistants (Keijonen faculty project funding, Mäkinen 30%)

Administration, support and other

- Office manager (Väisänen), IT manager (Kutvonen)

- Two amanuenses (Kujala, Mustonen), one financial and human resources secretary (Pajunen, on study leave until 31 March 2013), one department secretary (Kokkonen), two organisers (Sivèn, Kuuppelomäki handling duties of planning secretary at HIIT until 15 Sept 2013), one translator (Kurtén)
- Four IT specialists (Jaakkola, Niklander, Rauhala, Vettenranta), two IT designers (Hautakangas, Koskinen 60%)

In addition, there are 3 academy fellows (Hoyer, Koivisto, Honkela) and some 30 part-time teachers annually employed by the department.

Posts becoming vacant

Of the department staff currently salaried from the basic allocation, three will be at least 63 years old by the end of 2013.

Graduate schools

The department has 13 doctoral students in the funded posts of the FIGS and Hecse graduate schools. The part of research school students' salaries that exceeds the research school salary will be covered by means from the 2013 research evaluation. In addition, there is one doctoral student in the UH postgraduate school post (Langohr, leave of absence until 22 Aug 2013).

Employees retained on external funding

There are totally some 65 person-years carried out on different levels of the work structure, from research staff to principal investigators.

The staff structure according to sub-programme is presented in Attachment 1.

1.3. Target state for staff structure

The present state is near the target for the staff structure. The distribution of research and teaching posts is still being changed in favour of more professorships and the number of professors is being increased. The department staff is young in general, but some teaching and research duties as well as administrative duties may become vacant during the planning period due to retirement.

The number of administrative employees is near its target, and the administrators have permanent employment contracts. The university reformation has added to the financial responsibilities of the departments through e.g. budgeting and follow-up, so the administrative resources of the department have been directed towards financial management. However, the department still looks after finances and staff with smaller resources than other departments of similar size. In accordance with requests from research groups, we will

attempt to add to the administrative resources with a research coordinator, who will be funded by a general costs contribution from the projects.

2. Outlines and goals for improving the staff structure

Annually, over 200 employees work at the department, completing some 150 person-years (140 in 2011). Around half of the person-years are completed on external funding. In addition, a significant number of part-time teachers work at the department. During the past five years, the average age has varied between 33.3 and 36.4. Over 20% of the employees are foreigners, who complete over 20% of the person-years, and women make up slightly less than 20% of the staff.

The principles for the HR policy of the department have been described in the Quality Manual, chapter C.2 Staff. At regular intervals, a staff plan is drawn up at the department to define the changes to be made at the department during the planning period when it comes to the structure of staff employed on allocated funds. The heads of research units and projects are in charge of the HR plans for their own units.

Principles and actions, according to which freed-up resources are directed and the staff structure at the department is improved

- The use of the tenure-track process will be extended; new positions established at the department will primarily be professorships.
- Contracts are made for the duration of projects as much as possible, and for the duration of the degree work for postgraduates.
- We will strive to add to the number of postdoctoral researchers and doctoral students while decreasing the percentage of research assistants in the research staff, The research fields of new professors will be supported by hiring postdocs/doctoral students for their fields.
- International and active recruitment and speeding up the recruitment process; we will continue to try and recruit quality teaching and research staff from abroad.
- The HR planning takes equality into consideration.
- The core staff in administration and support has permanent employment.
- When recruiting employees for teaching posts, more attention will be paid to merits in the field of teaching.
- The strengths of part-time teaching will be utilised better.
- Any new focus areas in research will be examined during the planning period, and open vacancies will be directed towards them.

3. Staff-related development in the planning period

The distribution of department staff into their various duties is near its objective. However, the department is continuing to increase its number of professors in accordance with the previous scientific evaluation, as well as to participate in the new tenure-track method of professor recruitment. These vacancies will be funded with monies freed up from lectureships and professors going into retirement, as well as external funding. Postdocs or doctoral students will be recruited gradually for the research areas of new professors on basic allocated funds.

In addition, the research groups of the new professors will increase the number of research staff salaried with external funding.

At the moment, three vacant professorships are being filled (two tenure-track professorships/*one has been filled* and one for software technology/*has been filled from 1 January 2013*). The professorship vacated through resigning from the software systems sub-programme will be filled during the planning period. The posts as university researcher that are vacant will not be filled for now. The department's finances permitting, they might be filled in future, though.

In the past few years, we have tried to cut back on the number of research assistants in the department's staff structure (in 2011, research assistants stood for 26% of person years in teaching and research), since high-end research cannot be carried out by trainees. The department's objective is to use an increasing part of research resources on higher research positions. The post of research assistant is still important for attaching promising new people to the research community at an early stage.

3.1. Actions for the planning period: 2012-2013

1. Two professorships will be filled through the tenure track process. The rector has allocated funding for the initial stages of one of the vacancies. For permanent funding, resources freed through retirement will be utilised. The recruitment process is at the interviewing stage. (Koivisto from 1 January 2013, Sauerwald has not decided yet)
2. The following positions have been declared vacant and will be filled, or will be declared vacant:
 - Professor (software technology, formerly Sippu). Specialist stage on-going. (*Männistö from 1 January 2013*)
 - The professorship left by Abrahamsson will be redirected (data security), declared vacant and filled (Asokan standing in until 31 July 2014)
 - University lectureship (bioinformatics) to be filled or changed into tenure track post, unless a suitable person for this post is selected for one of the tenure track posts being filled now (*Post as university lecturer vacant, application period ends 28 February 2013*)
 - Professor Aapo Hyvärinen to be made permanent by invitation (professor in charge of the neuro-informatics profile in the international neuro-informatics programme/the Alko programme). (*Invitation procedure on-going*)
 - A research coordinator (backing from SHOK; procuring external funding)
3. Introduction package for new professors
 - The objective is to hire one postdoctoral researcher or doctoral student for each new professor's group for 1-2 years or so. Funded by basic allocations and external funding. In 2013, the introduction package will be needed for 2 new professors (data security, software technology).
 - Further support for new professors: the department will contribute to any special equipment necessary for starting the work of the new professors.
4. External funding will be sought for the following research-centred professors' duties:
 - FiDiPro professorship on Tekes or FA funding

- FA academy professorship
5. Improvement of standards:
- The rules of procedure at the department will be updated. The rules of procedure will include the allocation of duties among administrative and office staff. The administrative work procedures will be scrutinized, partially in cooperation with the service centre.
 - A more systematic integration of new managers into the department's routines and supervisory work.
 - Developing a policy for the use of the department's own research funds. Decisions to be made on principles for utilising funding surplus from projects and department research posts.

3.2. Actions for the planning period: 2014-2016

Only one professorship or tenure-track professorship may be declared vacant per year. The funding for these posts will come from resources freed through retirement. During this planning period, 1-2 permanent teachers and 1-2 administration officers will most likely retire.

3.3. Staff needs of development projects during the planning period

1. Development of teaching and research in data security
 - professorship (formerly Abrahamsson)
2. Tools for heading the teaching field and evaluating the learning (3 sub-projects)
 - Project A. person in charge; Project B. programming and maintenance; Project C. programming and maintenance
3. The evolving campus: boosting teaching and research through ubiquitous computing
 - specialist
4. Improving the infrastructure (updating the cluster and the storage architecture)
 - the staff requirements have not been set
5. International Master's programme in neuro-informatics
 - professor in charge (A. Hyvärinen)

4. Focus areas and goals of improving skills and wellbeing of staff

The main focus areas of improving the wellbeing of department staff has been described in the Quality Manual, chapter C.2.

The main focus areas of skills and wellbeing at the department during the planning period are:

1. Staff training

The department supports its staff to improve and maintain its skills actively. Employees are encouraged to participate in staff training by the university, as well as independent studying relating to their work duties through e.g. flexible working hours. Especially the pedagogical studies of the teaching staff are supported, and we are making it more systematic. In accordance with the university's strategy: The objective is to make sure that the skills at each level answer to the requirements of the duties. Intercultural work, communications, networking, supervising, financial, and work community skills are especially promoted.

2. Wellbeing in the workplace

The department supports the wellbeing of its employees within the confines of financial resources, e.g. by offering various services (50% of the sports fee, massage chair). There are two wellbeing committees at the department (one in Finnish and one in English). projects developed by the committees for supporting the staff's psychological and physical wellbeing will be implemented as finances allow. Maintaining a positive work atmosphere: shared governance and communality will be promoted especially by organising regular events that are planned and implemented by the staff. Teaching and other work will be developed together as much as possible.

3. The internationalisation of the work community

The department has become increasingly more international the past few years. Over 20% of the employees are foreigners. The department website and the staff guide are kept up in two languages. The department administration has especially invested in the integration and guidance of foreign employees. Common events for the staff are held in English as well as in Finnish. The staff is encouraged to attend international conferences and participate in research and teaching exchange, and visits by international researchers and teachers are supported, as much as financially possible.

ATTACHMENT 1 Staff structure (teaching and research) according to sub-programme:

Algorithms and machine learning

- 4 permanent professors (Kivinen, Myllymäki, Toivonen, Ukkonen)
- 1 associate professor (Koivisto on leave of absence until 31 Aug 2013)
- 3 permanent university lecturers (Pasanen, 2 exempted: Floréen HIIT, Hyvärinen)
- postdoctoral researcher (Järvisalo, other funding)

Networks and services

- 3 permanent professors (Jacucci, Kangasharju, Tarkoma)
- 1 fixed-term professor (Asokan 18 Sept 2012-31 July 2014)
- 4 permanent university lecturers/lecturers (Karvi, Kutvonen, Kerola, Kojo)
- 1 fixed-term university lecturer (Ruohomaa until 31 July 2013)
- 1 permanent university instructor (Niklander)
- 1 fixed-term postdoctoral researcher (Hoggan until 30 Oct 2013)
- 2 fixed-term doctoral students (Ruokolainen until 31 Dec 2012, Pervilä until 31 July 2013)

Software systems

- 2 permanent professors (Paakki, Männistö)
- 1 fixed-term acting professor (Puustjärvi until 31 July 2013)
- 1 FiDiPro professor (Münch until 31 Dec 2014)
- 6.5 permanent university lecturers/lecturers (Laakso, Lukkainen, Tuovinen, Laine, Nurmi, Vihavainen 50%, Wikla)
- 1 fixed-term university instructor (Vihavainen A. until 31 Dec 2012)
- 1 fixed-term doctoral student (Apiola until 31 Mar 2013)

Bioinformatics

- 1 permanent professor (Mäkinen)
- 1 post as university lecturer vacant

Employees not tied to sub-programmes

- 1 professorship pooled with the Department of Mathematics and Statistics 2008-13 (Hyvärinen)
- 1 permanent lecturer (Lokki)
- 1 permanent university lecturer (Kurhila)
- 1 research coordinator (Moen)

ATTACHMENT 2: Statistics on staff structure

Person-years according to category	2007	2008	2009	2010	2011	2011%
<i>Teaching and research staff</i>	152.5	143.8	154.6	140.8	123.2	88.0%
<i>4th level</i>						8.9%
Professors	11.6	11.0	13.0	12.5	11.6	
Principal investigators	1.0	1.2	0.4	0.4	0.8	
<i>3rd level</i>						15.8%
University lecturers, lecturers	20.7	18.9	16.6	14.1	14.8	
Researchers (Academy fellows, university researchers, senior researchers, research coordinators)	31.3	13.4	8.1	9.3	7.4	
<i>2nd level</i>						11.9%
Postdoctoral researchers	7.4	9.3	13.2	16.2	15.0	
University instructors	0.0	0.8	2.0	3.6	1.7	
<i>1st level</i>						46.9%
Doctoral students, assistants	29.1	44.7	47.0	38.6	32.7	
Research assistants, project researchers	38.5	32.1	38.4	38.1	32.9	
<i>Other teaching and research staff: part-time teachers</i>	12.8	12.4	15.9	8.0	6.3	4.5%
<i>Other staff</i>	17.1	15.2	18.4	17.4	16.8	12.0%
Administrative staff	8.9	7.5	8.2	7.5	8.2	
IT staff	8.0	7.7	8.8	9.1	8.0	
Other	0.2	0.0	1.3	0.9	0.6	
TOTAL	169.6	158.9	173.0	158.3	140.0	100 %