

The Study Counselling Plan of the Degree Programme in Computer Sciences

1. Background

This document describes the academic study counselling approach of the Degree Programme in Computer Sciences at the University of Tampere. Also, the implementation and development ideas of the academic counselling are outlined. One of the major issues influencing the study counselling in the Programme is the large amount of students: already our basic yearly summer intake of students is more than 100 students. Moreover, there are several special groups of incoming students, e.g., the international Master of Science Degree Programme students whose number yearly is 20-30.

We have long traditions in the Degree Programme concerning the study counselling of the students starting at Bachelor level – in fact, our systematic counselling started already in autumn 2002 at the Department of Computer Science of that time. The leading idea has been to strengthen the student engagement to the School by providing each of them a personal coaching teacher with whom it is possible to discuss study issues both in private and in small groups. Special attention is paid on how to make the content and work forms of the first year courses to suit the new students. To accomplish this, we use counselling as an important supplementary channel to collect feedback to complement the traditional feedback procedures after each course.

The early stage counselling has increased our knowledge concerning the starting difficulties and the progress of the students during their first three years. However, so far the counselling after the third year has been mostly the responsibility of the student himself. Therefore our latest developments in the area of counselling have focused on this, e.g., by naming persons in charge for counselling to each of the Master of Science Programmes (head of academic counselling), by arranging special information events during spring and autumn, and also harmonizing the graduate seminars. We have also established a Bachelor Clinic to serve as a bridge between the counselling of the final Bachelor years and the beginning of the Master level studies.

The Study Counselling Plan is a document that evolves every year. The joint training of the heads of study counselling at the university level as well as the university-wide guidelines (the policy paper of the Teaching Council, the guidelines for the Study Counselling Plan and the goals of the counselling process) help in developing and improving our Study Counselling Plan.

2. The goals of study counselling

The main goals of study counselling are as follows:

Supporting students in their independent work and taking responsibility for their studies. The counselling continues during all their study years and supports the growth to self-guidance.

Supporting process type planning of the studies. Emphasizing the process way of working supports the goal to encourage the student to complete their studies in the planned period of time. While in the Master level studies, the support includes especially starting the Thesis writing process in due time with respect to the studies.

Making visible the support structures of studies. The counselling work lowers the teacher-student communication barriers, e.g., makes the meetings with teachers mundane and familiarizes students with the support structures which to rely on while planning their studies.

The prevention of possible problematic situations and addressing them in time. When students have the possibility to ask and obtain information from issues that puzzle them, problems are addressed early on.

Taking fully into account the studies the students are taken at other universities and universities of applied sciences. Many new students already have competence in the area of their studies, for example, those who have completed several courses at the Open University. New students are informed about the importance of utilizing all their previous studies in their current study programme. This is done in the information package sent to new students, in orientation studies and throughout the first year study counselling. The recognition of previously acquired know-how enables the right persons to move directly and in time to a Master's Programme.

Harmonizing previously acquired know-how (AHOT) actions. The actions related to the recognition of previously acquired know-how is about to be harmonized, that is, common procedures to measure previously acquired know-how and to transform it to study credits has begun. So far, this process is applied mainly to basic studies on programming and databases and to Project work course at the level of intermediate studies.

Guiding and supporting the increase of student know-how. Our goal is to guide the student to create an appropriate learning profile.

3. Organizing study counselling and its resources

Study counselling at the very beginning of studies

Immediately after being accepted to the computer science studies the students are sent an information package related to the very start of the studies as well as to the planning of studies and counselling. New students take part to the lectures series of initial orientation. In a special session of their own studies programme they are informed of proper study practices and are given guidelines how to construct their personal study plan (HOPS document).

Study counselling at the Bachelor level

The Bachelor level counselling is organized into a three-year course "Guided Planning of Studies, 2 credits" (HOPS-course). The course includes:

- Formulating and maintaining a personal study plan.
- During the first years there are three small group meetings and two personal meetings with the guiding teacher.
- During the last two years there are two personal meetings with the guiding teacher on both years.

The small group meetings start with a welcoming session where besides introductions and free-form discussion also several important issues concerning the start of academic studies are covered. These include, for example, academic ethics, working methods in academic studies as well as special arrangements for students. In the later group meetings students are required to give short presentations of study related topics of their own interest. Issues that are yearly dealt with comprise among others of supplementary studies and choosing the Master Study Programme.

Personal meetings provide students with individual and confidential study counselling and form the most important part of guided study planning. Students' personal study plans are reviewed in the personal meetings. The meetings also contain general informal discussion about the students' recent study experiences, which e.g. allows the students to give confidential feedback about the computer science degree programme. Such feedback is discussed in yearly meetings of the teaching personnel of the degree programme.

Students typically complete the Guided Study Planning / HOPS course during the third year spring semester. However, they can get credits already earlier, if they have some earlier studies that compensate the first three year requirements. In order to obtain a grade they are also required to make a decision which Master's program they choose and complete a study structures plan for further guidance.

Lecturers, university researchers and doctoral students act typically as guiding teachers (HOPS-teachers). The number of them has varied between eight and sixteen. One of the HOPS-teachers acts as the head of study counselling who organizes the assignment of students in small counselling groups (HOPS groups) to each counselling teacher. He is also responsible of the development of the counselling activities as well as tutoring and briefing the new counselling teachers. Moreover, his duties include reporting to the head of study program and arranging various meetings for counselling teachers, e.g., to share experiences of each semester.

Each HOPS-teacher is assigned a group of students, the number of students has varied from 6 to 15. If the counselling teacher is a doctoral student he/she has only one group for three years while the other teachers have three groups all the time: one new group each year. The goal is to establish a sustained teacher-student relationship. In addition, the student groups are assembled with the intention that they should contain students of rather similar study background and age.

Our study program strives for common practices in all the HOPS-groups. It is accomplished by imposing guidelines of the work and a year clock for all the important events during the year. These inform each counselling teacher what and when he/she should pay attention to and carry out. There are also at least two yearly meetings for planning and reflection of the counselling work. In these meetings the teachers discuss different situations that have arisen in their counselling. Then they collaboratively try to find solutions to problems and suggest improvements to study program. Besides these summing up meetings the head of study counselling arranges at the end of spring semester an open discussion event for all the teachers in the study programme. In that meeting the main issues that have arisen in the HOPS process are

reported and discussed publicly. In these meetings also long-term trends of counselling and studies are discussed (e.g., the trends of the years 2002-2016).

The thesis work at Bachelor level is written on a separate course where the course lecturer and substance experts from various subject areas are responsible for the guidance. The course provides also guidance for completing the Bachelor level studies.

After the first three years the official counselling at the Bachelor level ends and the students are moved to Master level counselling. If their selection of the Master's program is not yet finalized or if their Bachelor level studies are not advanced sufficiently the students can also participate in the *Bachelor Clinic*. The Bachelor Clinic supports the students in getting their Bachelor thesis ready using work methods that are selected to suit the participants. The main method of work has been personal guidance but during the spring 2015 semester the clinic students were also offered an opportunity to participate in extra teaching in statistics.

During the spring semester of 2016 we started joint coffee events with students and computer science personnel to discuss current issues. These events are organized once a month during semesters together with the Study Programme of Mathematics and Statistics.

During the first of the autumn semester and the last of the spring semester coffee event there is a special meeting comprising the head of study counselling, counselling teachers, the respective student tutors and their tutor in charge. In these meetings we focus especially on issues related to the guidance of new students starting their studies in autumn. Moreover, every spring term the heads of study counselling and student tutoring get together to discuss coordination of early study counselling at the School level.

Study counselling at the Master level

After Bachelor level studies it is possible for the students in Computer Science Degree Programme to continue to the Master level studies to their liking, either in the Finnish programmes or in English programmes.

The practices of Master level counselling have been varied and the counselling has not been as frequent as those in Bachelor level. Indeed, the counselling at this phase of studies requires that students start to take more responsibility on the planning of their studies.

The Introductions to each of the Master level programs are held at the beginning of each autumn semester. These introductory sessions are aimed for students who are at the final stages of their Bachelor studies as well as for those new students who are starting directly their Master level studies. In the spring semester the Master level programmes organize information events where the emphasis lies in informing of the tentative subjects of Master's thesis and on the research carried out at the School.

In the context of the Master level study introductions there are also special group meetings. In addition to students and respective Master level counselling teachers also personnel from the study services take part. Moreover, representatives of the student organization Luuppi are present at joint events of Master level studies. The goal is to invoke joint discussion, acquaint students with each other in order to produce relevant student groups and also, familiarize students with the staff already in an early stage.

There are four Master's degree programmes (MDPs) - MDP in Computer Sciences (TIM) in Finnish, as well as in English the following three: MDP in Human-Technology Interaction (HTI), MDP in Software Development (SDE), and MDP in Computational Big Data Analytics (CBDA). There is a head of study counselling appointed to each of the Master Degree Programmes. However, part of the counselling responsibilities lies also on the different *learning profile* study leaders. All Master Degree programmes utilize the study structures plan, fulfilling of which starts the study counselling at the Master's level.

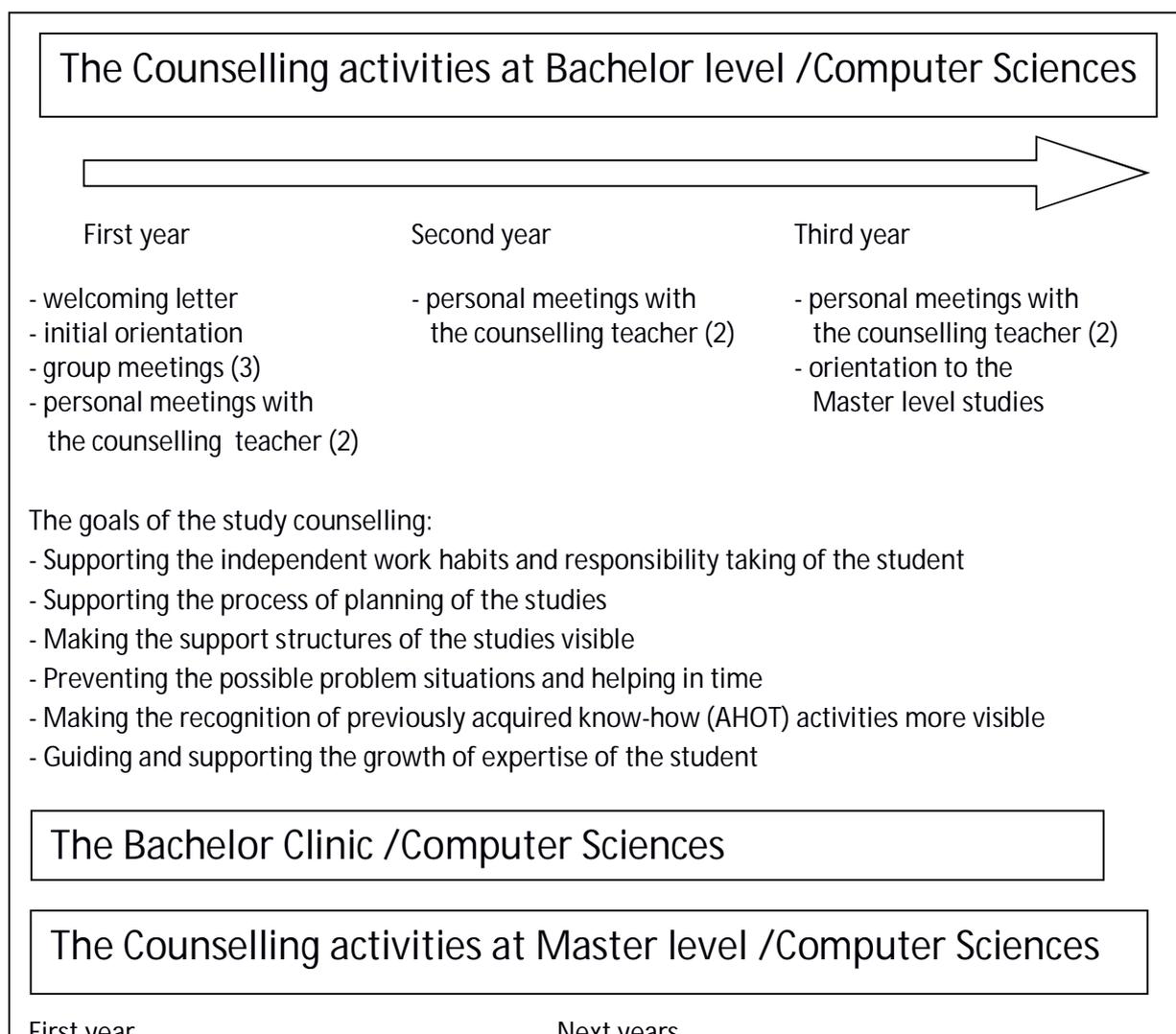
The counselling processes of the TIM Programme are becoming more systematical after the curriculum reform of 2015. More attention has been paid to the students who start their studies directly at the Master level.

In the English Master's Degree Programmes the counselling has been structured for a long time. Both in the HTI and SDE programmes there has been a head for counselling with whom the students construct at the very beginning of their studies a personal study plan. Especially with respect to the international students it is important to pay attention to their background schooling because it varies more than that of the Finnish students. The CBDA Master program there are heads of study counselling from both the computer science and statistics.

The Master's Thesis is mainly written in the context of a Thesis Seminar. The process of writing a thesis is described in the Study Guide.

Study counselling in a nutshell

In the following figure the Bachelor and Master level counselling activities are depicted in a concise form.



4. The division of tasks and responsibilities in study counselling

In this division the main principle is that of our university's: "every teacher is a counselling person", but in order to be more precise what follows is a list of responsible persons (cf. also the matrix in the appendix).

(1 - coordination/main responsibility; 2 - implementing/partly responsible; 3 - taking part to implementation/support)

- Head of Study Counselling (w.r.t. the Bachelor and Master level studies)
 - responsible for the coordination of counselling teacher activities (1),
 - responsible for the counselling of students in his/her own counselling groups (1)
 - the main actor in counselling training and collaborative networks (2)
 - participates in the pedagogical development: study plan work, feedback, informing (3).
- Study Coordinator
 - the main actor in counselling and informing students (2)
 - participates in organizing the work of counselling teachers (3)
 - participates in the pedagogical development: study plan work, feedback (3).
- Degree Programme Director
 - responsible for the pedagogical development: study plan work, feedback (1)
 - the main actor in the pedagogical development, counselling training, peer networks (2)
 - the main actor guiding the students (2)
 - participates in the practices of counselling work, informing of the counselling (3).
- Bachelor level counselling teacher
 - responsible for Bachelor level counselling (max 3 years per group), own groups (1).
 - collects students response from his/her courses (2).
 - participates into the study plan work of the Study Programme (3).
- Master level counselling teacher
 - responsible for counselling Master level students, perhaps also a guide of the Master's Thesis (1)
 - collects students response from his/her courses (2).
 - participates into the study plan work of the Study Programme (3).
- Other teachers
 - takes part in counselling with respect to his/her own course (3).
 - collects students response from his/her courses (2).
 - participates into the study plan work of the Study Programme (3).
- Master's Thesis supervisor
 - Responsible for guiding the Master's Thesis work (1).
- International level study planning person (study services)
 - the main actor international studies
 - meets all the new exchange and international study programme students
 - organizes orientation infos with teachers.

Other actors

- The Dean of the School
 - supports the study plan work of the Study Programme (3)
- Head of Study Affairs
 - supports the study plan work of the Study Programme (3)
 - responsible for informing of the counselling issues both to the personnel and to students (1).
- Peer tutor
 - the main actor in counselling the students (2), peer counselling during the first study year (1).
- Student organization and peer learners
 - counselling in issues general to student in addition to counselling information (3).
- There are also other actors who are responsible for student counselling (study psychologist, common study services in the administration of the School, the student allowance personnel ...).

5. The evaluation, monitoring and development of the study counselling at the Degree Programme

The Study Counselling Plan of the Degree Programme must be evaluated on a yearly basis so that the necessary corrective measures can be done early. We plan to carry out this within the Study Programme as follows: the head of study counselling initiates this at the end of each spring term in order to make the changes before the new academic year.

The counselling teachers at the Bachelor level meet twice each academic year: at the turn of the year and at the end of the spring term. In these recollection and reflection meetings we discuss questions that have come up during everyday counselling as well as ideas how to develop the curriculum of the Study Programme. Finally, at the end of the academic year - in early June - there is a meeting for the entire personnel of the Degree Programme where the counselling responsible describes the counselling activities, e.g., statistics of students involved in the process and their comments of the Degree Programme. Also the main suggestions from the counselling teachers to further develop the Degree Programme are presented which typically leads to more general discussion of the teaching issues.

Actions to improve the expertise of the Bachelor level counselling teachers are important although the Doctorate students who take part in counselling are only involved three years in the process. In-house training sessions have been organized during past years.

At the Master level, on the other hand, we must strive for homogeneous policies and work practices. A responsible person has been appointed in the School of Information Sciences to initiate and coordinate this process. This work started at the school level with a joint meeting where good practices especially for Bachelor-Master transition phase and also for Master level counselling. This process of reflecting, producing new ideas, and developing the work practices should be carried out each year.

The Tampere3 cooperation brings new challenges also into the counselling process, for example, the cross-studies opportunities (taking courses from each of the three universities) must be taken into account in the planning of studies.

APPENDIX

The tasks of the Head of Study Counselling, w.r.t. other actors (Computer Sciences, modified from Ihonen *et al.*)

1 = coordination/main responsibility

2 = implementing/partly responsible

3 = taking part to implementation/support

	The pedagogical development of the Degree Programme			The coordination of the Counselling teachers			Counselling the students		
	Study program work in the Degree Programme	Collecting and processing student feedback	Counselling training and peer networks	The practices of the Degree Programme	Meetings of the counselling teachers (support material)	Organizing the groups in counselling	Counselling	Informing of the counselling issues (personnel and students)	Peer tutoring
Dean of the School	3								
Head of Study Affairs	3							1	
Study Coordinator	3	3				3	2	2	
Degree Programme Director	1	1	2	3			2	3	
Head of Study Counselling	3	3	2	1	1	1	1	3	
Counselling teacher (HOPS teacher)	3	2					1		
Other teachers	3	2					3		
Peer tutor							2		1
Other students							3		
Study psychologist							3		
Other common study services							3		