Universiteit Utrecht

Honors Program Manual - Computer Science 2022-2023

This manual describes the content and organization of the Honors program of the Bachelor's program in Computer Science at Utrecht University (UU). The intended readers are:

- The honors students,
- 1st year students who would like to join the Honors Program
- Lecturers involved in the Honors Program

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I. General Objectives and Scope

General Objectives of the Honors Program

At Utrecht University (UU) the Honors Programs are being developed at the level of the different faculties and departments. The following objectives of the Utrecht honors education are mentioned in the policy memorandum "Honors Colleges at the UU" (16 May 2012, M. Bok, A Koster and R. van der Vaart):

- Provide the best students with extra challenges
- Provide a better starting position for further education and the labor market
- Be a growth center for excellent teachers, researchers and academic professionals
- Be an experimental space for education, so that new ideas can penetrate existing education
- Strengthen the position of UU as a leading research university, which can attract talent (teachers and students) from the Netherlands and abroad

As soon as the honors program has been successfully completed, a separate certificate will be issued on which this achievement is stated.

Size of the Computer Science Honors Program

The regular Bachelor's degree in Information Science is 180 EC (points according to the European Credit Transfer System)[1]. The Computer Science Honors Program comprises 45 EC: 15 EC extracurricular and 30 EC within the bachelor.

- 7.5 extracurricular EC are awarded on the basis of successful participation in the various interdisciplinary honors activities, including the Science Honors Academy.
- 7.5 extracurricular EC are awarded by following an individual or groups Honors Research Project, for example in the form of a scientific internship with a lecturer or professor, and writing a report as a result of this internship. The Honors Research Project can be performed in groups (comprising students from the Information Science, as well as from Computer Science and potentially students from other disciplines), or individually. In the context of the Honors Research Project, students meet regularly not only with their group (in case of a group project), but also with the rest of the Honors students from the Information and Computer Science disciplines, to present and discuss their ongoing projects, exchange ideas, and organize educational excursions. Students are expected to be pro-active in regards to the organization and attendance of the regular meetings described above. The honours research project results in an honours thesis.
- 7.5 EC are awarded by choosing and following, as part of their elective courses within the bachelor, one course from the Mathematics programme.
- Students who follow the TWIN program do not need to follow an additional course, and their bachelor thesis counts as honours thesis.
- 7.5 EC are awarded for completing either the introductory project course in period 2, or the Data structures course (INFODS) in period 4 or the Graphics course (INFOGR) in period 4 of the first year at honors level.
- 7.5 EC are awarded for completing either the Software or Gameproject (INFOSP or INFOB3GSP)

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[1] 1 EC corresponds to 28 hours of study time, including contact hours

of the third year at the honors level.

For the last two elements (INFODS or INFOGR and Software or Gameproject), completing them at honors level, means that the student has to provide more input and perform more research than what would typically be required.

The above program EC distribution is the standard program that is supported by the Science Honors Academy and Computer Science. However, students can, in consultation with the coordinator, fill in components in other ways, e.g. through interdisciplinary projects with other faculties, honors components for other subjects or personal interpretation (summer schools, etc.).

II.   Admission and Tranfer to subsequent years

The rules of the Honors Program are laid down in the Course Examination Regulations (OER 2020-2021 - article 3.9).

Entry to the Honors Program is possible in study year 1, before period 4.

Admission to the Honors Program and transfer to it is based on a selection of a student by the honors coordinators. The student can show his or her interest at any time.

<u>Admission to the Honors Program</u>

- At any time in year 1 (before period 4), the student can apply for admission to the Honors Program by sending a short motivation letter to the respective coordinator.
- Students who are in the top 10% of their class or have an average grade of 7.5 after period 2 are approached to apply for a place in the Honors Program during period 3.
- Students can also be contacted to apply based on the tutor's recommendation.
- The honors coordinators decide upon the admission of the student to the Honors Program.

<u>Transfer to years 2 and 3 withing the Hornors Program</u>

Students who still meet the requirements of the Honors Program after the end of academic year 1 are invited for the subsequent part program of the Honors Program.

Students can be removed from the Honors Program after an academic year if they:

- have not obtained more than one subject in the relevant academic year, or

- have not achieved an average grade of at least 7.0, or

- have not actively participated in the (extra-) curricular activities.

The education director decides on the removal, following consultation with the Honors coordinator, and in his/her opinion includes any special personal circumstances that the student has reported to him as soon as can be reasonably expected.

Individual conversation

Students have a personal conversation with one or both the honors coordinators evey six months regarding the student's current progress as well as regarding the topics that the student will pay extra attention in the coming six months.

III.   Science Honours Academy

All honors students from the Science Faculty together form the Science Honors Academy. This is the interdisciplinary community of honors students from the departments of Biology, Pharmacy, Computing and Information Science, Physics and Astronomy, Chemistry and Mathematics.

The Science Honors Academy is coordinated by Dr. M. Löffler (M.loffler@uu.nl). The coordinators of the Honors Program of Computer Science inform Dr. Löffler about which students are participants. There is a minimum obligation of active participation that must be agreed with Dr. Löffler. See also: http://sciencehonours.sites.uu.nl/

The activities consist of interdisciplinary symposia, projects, workshops and excursions. The topics that are covered are outside the regular curriculum. The language of instruction is English.

Every year an educational trip abroad is organized. Participation in one such trip during the bachelor's program is compulsory. Only one trip abroad per student is subsidized by the Honors Academy. The student must consult with the coordinators of the courses the education of which he/she will miss during the trip's week. The dean will indicate in a letter that he/she will support this trip.

At the beginning of the academic year, the program of the Science Honors Academy is not yet fixed, since it is the students who organize the activities themselves. For and by the participants of the Science Honors Academy, a website with up-to-date information is kept.

Outside the Honors Program there are of course even more opportunities for those students who are looking to further broaden their knowledge or to obtain more information about Computer Science developments in the Netherlands or abroad.

IV.   The Honors Program within Regular Courses

Either the Introduction project, the Data structure or Graphics course must be accomplished at honors level. The software or game project must also be performed at honors level. This means that one (or more) honors groups are formed for thes regular courses. For these groups, assignments are formulated with extra challenge for the students.

It is also possible for students themselves to propose an honors component that is attached to other regular courses. This is done in consultation with the coordinator and the lecturer of the relevant course. The honors student who wishes to perform an honors assignment in one of these courses is responsible for the assignment that is considered as an honors level. The coordinator, course lecturer and the students jointly determine the exact content of the assignment and indicate the criteria explaining why this will be an honors assignment.

For the courses above, the final grade of the regular course is determined in the same way as for regular students. If the honors assignment has not been carried out to the satisfaction of the course lecturer and the honors coordinator, the honors student will not complete the course with an honors label.

Honors assignment description for courses within the regular program

The lecturers are asked, in consultation with the student, to state the following elements in their description of an honors assignment:

Lecturer(s)	
Course, period, study year	
Title & Description of the assignment	
Intended learning objectives	
Criteria on which the student is assessed	*The student him/herself can propose additional criteria according to which he / she wants to be assessed in order to practice certain academic or personal*
Student name(s) and student number(s)	

<u>Additional instructions for lecturers</u>

- The Honors assignment described above contains in-depth material for honors students: articles and other information, offered for self-study. The required insight goes beyond what can be expected from the average Computer science student. The assignment deals with a subject that will not be encountered in the same way in the curriculum, not even in later academic years (i.e. only applying a mathematical technique in a project that is also being dealt with in another course is not considered adequate). In other words, there is no room in the regular curriculum for the subject of the assignment.

- The student can come up with an assignment initiative him/herself. On the basis of the assignment, students can indicate, for example, to use additional formal or new techniques, in order to focus on possible interdisciplinary aspects of the assignment.

- The students can be asked, by means of an open assignment, to structure their work themselves and to fill it in from a creative perspective.

- For more information, see also the note "In-depth honors assignments for a course",

Hanne ten Berge, 18 June 2013 and the Report 'Building blocks for a renewed Honors program' by Nora Assendorp et al. (2013).

V.   Study year 1

In addition to their participation in the Honors Academy, the following activities are planned for honors students in the 1st year of the Honors Program:

- Introduction project at honors level in period 2 or the Data structure or Graphics course in period 4 (7.5 EC)
- Students can choose to follow a course from the mathematics programme.
- Learning to maintain a portfolio during the honors years. In this 1st year extra attention is paid to the importance of a portfolio.
- At the end of the first academic year, there is an interview with the honors coordinator(s). At that moment the student can make the following choices:
  - o   Continue with only the TWIN study
  - o   Continue with the TWIN study including the honors program
  - o   Continue with the honors program
  - o   Stop all honors activities

Portfolio

The portfolio is a (digital) tool that is meant to keep track of progress of the student in regards to their study achievments and (academic) skills. It is meant to help the student and the coordinator: 1) monitor, 2) reflect upo and 3) assess the student's progress[2].

Keeping a portfolio is useful for every Computer Science student, and students are advised to maintain this at the start of the first academic year. However, keeping a portfolio is not compulsory for regular students. Since honors students have to make extra choices compared to regular students, it is important that they keep a portfolio. In the honors program, however, students are given a great deal of freedom with regard to the interpretation of interdisciplinary components and their bachelor project. Maintaining a portfolio creates moments of overall self-reflection, while it also enables the student to reflect upon the honors program.

As a suggestion the following components can be stored in the portfolio:
- The honors essay that was made for registration for the honors program
- The letter of motivation made for registration to the honors program
- Reflections on the progress of the honors program at the end of year 1 and year 2, plus a final reflection report
- Products, ratings and reflections that are part of the honors program
- Short description on the progress per obligatory component of the honors program
- An essay at the end of each academic year that deals with personal developments, goals, possible improvement points and motivation

Furthermore, the students are free to determine what is stored in the portfolio. The Information Guide for students that explains the portfolio can be used by students to gain ideas.

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[2] Study guide year 1 (2013-2014)

VI. Study Year 2

In addition to the student's participation in the Science Honors Academy and the honors assignments within existing courses, academic year 2 of the Honors Program consists of the following elements:

- In the second year, students can choose to follow a course from the mathematics programme, if not yet done in the first year.
- the performance of a honorsworthy Honors Research Project assignment performed in groups or individually, and the writing of an honors report as a result of this project (7.5 EC). This project can be a scientific internship with one or more lecturers, but it can also be completed in other ways (for example the student following a special project-based honors course, or developing a course him/herself).
- In the context of the Honors Research Project described above (point 2), participation in and organization of a regular seminar or educational excursion for the Information Science and Computer Science honors students.

VII. Study Year 3

In addition to participation in the Science Honors Academy, study year 3 of the Honors Program consists of carrying out the final bachelor thesis project at honors level as an outcome of the research projcets, carrying out the Software Project at honours level, and participation in and organization of a monthly seminar for Computer and Information Science honors students.

Distribution of obtained ECTS during the 2.5-year Computer Science Honors Program

Tabel 1: ECTS distribution

Honors Program part	Description	ECTS	
Interdisciplinary activities Science Honors Academy (SHA)	Symposia, workshops and excursions for 2 years plus interdisciplinary assignment	7,5	Extra-curricular
Individual or group Honors research project and excursions, leading to an honours thesis	Academic internship and seminars/excursions	7,5	Extra-curricular
Course from Mathematics programme	Broadening your perspective	7,5	Profilering or Major
Introduction project, Data structures or Graphics	Performed at Honors Level	7,5	Major
Software project	Performed at Honors Level	15	Major
	Total	**45**	

VIII. Contact Details

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