Master Programme in Computer Science
2017/2018

The Master Programme in Computer Science offers a broad education with an emphasis on knowledge and analytical skills, providing a sustainable value. All courses focus on problem solving and general principles rather than particular programming languages or tools. Your education is based on current research taught by internationally renowned researchers at Uppsala University. This will prepare you well for an international career in companies or at a university.

The Department of Information Technology at Uppsala University is world leading in computer science research. Courses are taught by experts in their field and are always up to date.

We teach in an international environment that provides you with a worldwide network of professional contacts: researchers, teachers and fellow students.

ABOUT THE PROGRAMME

The programme has three specialisations:

- Computer Science
- Sino-Swedish Specialisation in Computer Science and Software Engineering
- Concurrency and Parallel Programming

Within each specialisation you can create your own profile by choosing courses to create your own specialisation that match your background along with your personal and professional interests.

Computer Science

The objective of this specialisation is to provide an individualised world-class education. We offer you a wide range of courses in computer science. You can create your own specialisation by individually combining courses. This choice is made in dialogue with student counsellors and teachers. Most courses integrate theory with practical exercises. By selecting suitable courses, you can become specialised in different areas of computer science.

Sino-Swedish Specialisation in Computer Science and Software Engineering

The Sino-Swedish specialisation offers at least one semester of studies at a university in China. You will have the opportunity to live in two cultures, and form close ties with two cities in different countries – which in turn will open doors in an international
The performance of modern computers increases by the possibility of performing more and more operations in parallel, instead of performing single operations faster. This is true for laptops as well as huge cloud servers. Parallel programming is becoming inevitable, but is still an activity performed by experts only. How to effectively program the machines of tomorrow with thousands of processor cores is still an open question. This programme is tied to and largely run by researchers from the UPMARC research centre. This centre is at the international forefront of programming of parallel machines, today’s as well as tomorrow’s.

The core of the specialisation consists of the special elements needed in programming languages, advanced computer architectures and parallel programming at various levels of abstraction. The specialisation prepares you for taking the lead in a computer industry that must become more and more parallelised, but at the moment lacks competence and tools, or to proceed with PhD studies in parallel programming.

DEGREE

The programme leads to a Master of Science (120 credits) with Computer Science as the main field of study.

INSTRUCTION

The Master Programme in Computer Science offers every student an individualised study plan that induces excellent learning opportunities. However, this requires that you are willing to work hard and have the ability to take personal responsibility for your education and your learning.

The forms of instruction and examination vary and are adapted to the character of the various subjects. This implies that laboratory work and small projects are found in most courses, while certain courses have major projects.

The Sino-Swedish specialisation offers at least one semester of studies at a university in Taiwan. You will have the opportunity to live in two cultures, and form close ties with two cities in different countries – which in turn will open doors in an international labour market.

CONTENTS

SPECIALISATIONS

- Concurrency and Parallel Programming
- Computer Science
- Sino-Swedish Master, Computer Science - Software Engineering

CAREER

The Master Programme in Computer Science provides you with the opportunity to work in a number of different areas. Job opportunities are abundant due to the increasing dependence on computers in all sectors of society.

You subsequently obtain considerable potential to determine your own future, and to constantly be on the front line of developments.

Most of our students work in the commercial IT sector as project managers or consultants in advanced product development or applied research, where they participate in the development of future products.

A number of students start their own companies to develop ideas and concepts acquired during their education. The programme is also an excellent preparation for PhD studies.
CONCURRENCY AND PARALLEL PROGRAMMING

120 credits
Autumn 2017 100% Campus
Location: Uppsala
Application Deadline: 2016-01-15
Enrolment Code: UU-M1324
Language of Instruction: English
Requirements:
Academic requirements
A Bachelor’s degree, equivalent to a Swedish Kandidatexamen, from an internationally recognised university.
Also required is:
- 90 credits in computer science, including programming, algorithms and data structures, computer architecture and operating Systems; and
- 30 credits in mathematics.
Language requirements
All applicants need to verify English language proficiency. This is normally attested by an internationally recognised test such as TOEFL or IELTS with the following minimum scores:
- IELTS: an overall mark of 6.5 and no section below 5.5
- TOEFL: Paper-based: Score of 4.5 (scale 1–6) in written test and a total score of 575. Internet-based: Score of 20 (scale 0–30) in written test and a total score of 90
- Cambridge: CAE, CPE
Exemptions for students from certain countries.
Selection: Students are selected based on:
- a total appraisal of quantity and quality of previous university studies; and
- a statement of purpose (1 page).
Fees: If you are not a citizen of a European Union (EU) or European Economic Area (EEA) country, or Switzerland, you are required to pay application and tuition fees. Read more about fees.
Application Fee: SEK 900
Tuition fee, first semester: SEK 72500
Tuition fee, total: SEK 290000

COMPUTER SCIENCE

120 credits
Autumn 2017 100% Campus
Location: Uppsala
Application Deadline: 2016-01-15
Enrolment Code: UU-M1320
Language of Instruction: English
Requirements:
Academic requirements
A Bachelor’s degree, equivalent to a Swedish Kandidatexamen, from an internationally recognised university.
Also required is:
- 90 credits in computer science, including programming, algorithms and data structures, computer architecture and operating Systems; and
- 30 credits in mathematics.
Language requirements
All applicants need to verify English language proficiency. This is normally attested by an internationally recognised test such as TOEFL or IELTS with the following minimum scores:
- IELTS: an overall mark of 6.5 and no section below 5.5
- TOEFL: Paper-based: Score of 4.5 (scale 1–6) in written test and a total score of 575. Internet-based: Score of 20 (scale 0–30) in written test and a total score of 90
- Cambridge: CAE, CPE
Exemptions for students from certain countries.
Selection: Students are selected based on:
- a total appraisal of quantity and quality of previous university studies; and
- a statement of purpose (1 page).
Fees: If you are not a citizen of a European Union (EU) or European Economic Area (EEA) country, or Switzerland, you are required to pay application and tuition fees. Read more about fees.
Application Fee: SEK 900
Tuition fee, first semester: SEK 72500
Tuition fee, total: SEK 290000
SINO-SWEDISH MASTER, COMPUTER SCIENCE - SOFTWARE ENGINEERING

120 credits

Autumn 2017 100% Campus

Location: Uppsala

Application Deadline: 2016-01-15

Enrolment Code: UU-M1322

Language of Instruction: English

Requirements:

Academic requirements
A Bachelor's degree, equivalent to a Swedish Kandidatexamen, from an internationally recognised university.

Also required is:

- 90 credits in computer science, including programming, algorithms and data structures, computer architecture and operating systems; and
- 30 credits in mathematics.

Language requirements
All applicants need to verify English language proficiency. This is normally attested by an internationally recognised test such as TOEFL or IELTS with the following minimum scores:

- IELTS: an overall mark of 6.5 and no section below 5.5
- TOEFL: Paper-based: Score of 4.5 (scale 1–6) in written test and a total score of 575. Internet-based: Score of 20 (scale 0–30) in written test and a total score of 90
- Cambridge: CAE, CPE

Exemptions for students from certain countries.

Selection: Students are selected based on:

- A total appraisal of quantity and quality of previous university studies; and
- A statement of purpose (1 page).

Fees: If you are not a citizen of a European Union (EU) or European Economic Area (EEA) country, or Switzerland, you are required to pay application and tuition fees. Read more about fees.

Application Fee: SEK 900

Tuition fee, first semester: SEK 72500

Tuition fee, total: SEK 290000

CONTACT & MORE INFO

Department of Information Technology
ITC, hus 1,2,4 Lägerhyddsv. 2
Box 337, 751 05 UPPSALA
Fax: 018-511925
E-mail: info@it.uu.se

For programme-specific information, please contact:
masters@it.uu.se

For general information about Master's studies at Uppsala University, please send an email to: masterprogrammes@uu.se