

# Program Integrating Course

## DD2300

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2016–2018

Course Goals and Implementation

Master's Education

The Computer Science Master's Programme

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# Course contents

- ▶ How do second-cycle studies at KTH work?
- ▶ What may a computer scientist do after graduation? Study visits.
- ▶ The aim and parts of the Master's programme: courses, tracks and master thesis.
- ▶ Self-reflection - what do I want with my education?

# Learning outcomes

After the course, the students should be able to:

- ▶ compare different **workplaces and professions** relevant to computer scientists,
- ▶ critically review and reflect in a deeper way over both the set-up and implementation of **the education** as well as the situation of the studies,
- ▶ plan and carry out **assignments** within stipulated time,
- ▶ identify their need of additional knowledge and continuously develop their skills in relation to the objective of the course and the **future professional role**,

in order to

- ▶ obtain the most of the education in a **long-term perspective**, influence the development of the program.

# Implementation

What will we do during this course?

- ▶ 8 reflection seminars
- ▶ Visits to IT companies
- ▶ Information about specializations (tracks)
- ▶ Information about master's thesis project

# Reflection seminars

## Mentors

Group numbers	Mentor	Department
1-2	Örjan Ekeberg	CST
3-4	Erik Fransén	CST
5-6	Sonja Buchegger	TCS
7-8	Mads Dam	TCS
9-10	Viggo Kann	TCS
11-12	Mårten Björkman	CVAP
13-14	Stefan Nilsson	TCS
15-16	Joakim Gustafson	TMH
17-18	Sten Ternström	TMH
19-20	John Folkesson	CVAP
21-22	Danica Kragić	CVAP
23-24	Tino Weinkauff	CST

# Reflection seminars

## Topics

1. The computer science master's program.
2. The study visit.
3. Specialization and the master's thesis.
4. Scientific, social and ethical aspects of computer science.
5. The computer science master's program revisited.
6. The study visit.
7. International opportunities and contexts.
8. The education in retrospect and life-long learning.



## Comments from last year

- ▶ The course becomes what you yourself make of it.
- ▶ Quality of study visits varied alot between companies visited.
- ▶ Does critique about courses actually reach the responsible persons?
- ▶ Write reflection comments early (before everyting has been said).

## Changes from last year

- ▶ More mentors.
- ▶ Mentors directly involved in the specialization tracks.
- ▶ More time to write and comment on reflections.
- ▶ Better instructions to companies hosting study visits.

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# Master's Education

What sets the requirements for a Master's degree?

- ▶ Swedish Higher Education Ordinance (SFS 2006:1053)
- ▶ Local goals for the Computer Science programme at KTH

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- ▶ demonstrate **deeper methodological knowledge** in their main field of study.

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- ▶ demonstrate an ability to clearly **present and discuss** their conclusions, and the knowledge and arguments behind them, in dialogue with different groups, **orally and in writing**, in national and international contexts; and
- ▶ demonstrate the skill required to **participate in research and development work** or to work independently in other advanced contexts.

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- ▶ demonstrate an ability to identify their need of further knowledge and to take **responsibility for developing their knowledge**.



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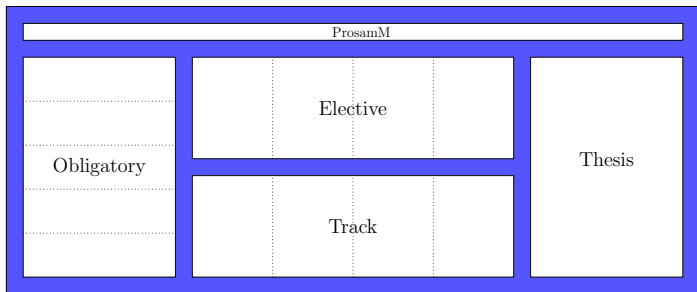
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# The Computer Science Master's Programme

The aim of the Master's programme is to provide a broad education in Computer Science with the possibility of deepening and specializing within the area of computer science, **the method science for construction of computer programmes including theoretical foundations as well as the practical ability to develop products and systems which include computers and software.**

The programme will provide the students with the requisites and abilities to participate and lead work within evaluation, development and implementation of new technology within the field of computer science.



## Structure of the Programme

- ▶ 32hp Obligatory courses
- ▶ 30hp Specialization (track)
- ▶ 28hp Elective courses
- ▶ 30hp Master's Thesis project

## Obligatory Courses

DD2300	Program Integrating Course	2.0
DA2210	Research Methodology	6.0
DD2440	Advanced Algorithms	6.0
IK2218	Protocols and Principles of the Internet	6.0
DD2380	Artificial Intelligence	6.0
DD2395	Computer Security	6.0

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Some students must also take some of

SF2736	Discrete Mathematics	7.5
DD2352	Algorithms and Complexity	7.5

# Tracks for Specialization

- ▶ Cognitive Systems
- ▶ Data Science
- ▶ High Performance Computing
- ▶ Scientific Computing
- ▶ Software Technology
- ▶ Theoretical Computer Science
- ▶ Interaction Design
- ▶ Visualization and Graphics