



Master Computer Science

Introduction

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Goals of the Master Program

Broad Education

↪ you have to choose modules from multiple areas

Deep Education

- we encourage specialization
- focus colloquium

Independence

- You are responsible for your studies!
- no fixed study plan
- no mandatory courses

Qualification

- for leadership positions
- for PhD

Overview

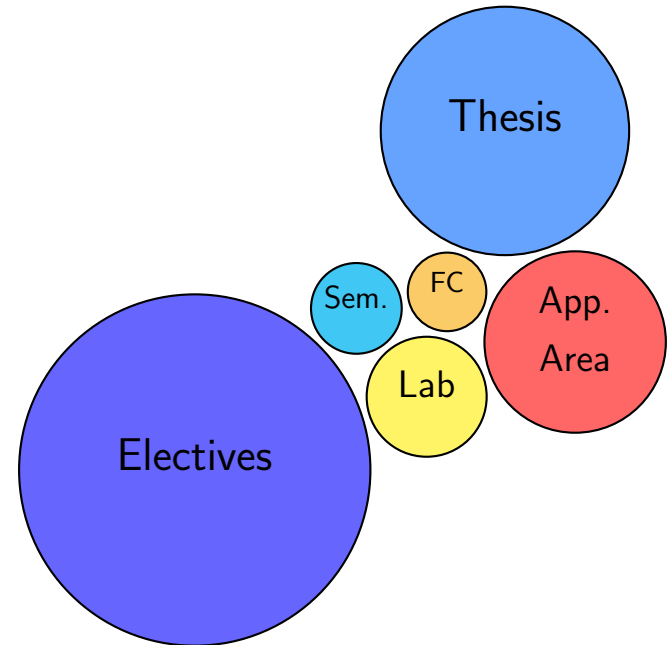
Structure of the Master Program

Electives	58 – 66 CP
Seminar	4 CP
Lab	7 CP
Focus Colloquium	3 CP
Application Area	10 – 18 CP
Thesis	30 CP
Course on Scientific Integrity	0 CP
Requirements	0 – 42 CP
Voluntary Additional Courses	0 – ∞ CP

Σ ≥ 120 CP + Requirements

> 120 CP

all courses count fully, or not at all



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Electives

Areas

Theoretical CS	Visual Computing & Interaction	AI & Data	Software Methods & Tools	Hardware/Software Systems
≥ 12 CP	two times ≥ 12 CP			
Algorithms Logic Verification ...	Computer Graphics VR Computer Vision ...	Language Processing Data Science Machine Learning ...	Project Management Quality Assurance HPC ...	IT-Security Embedded Systems Internet Technology ...

only electives count for the limits above

Electives

General Information

Components

lecture	typically 3h/week
exercise	typically 1-2h/week
exam	at end of semester

Admission for Exams

- teachers fix admission criteria
 - achieve minimum score in exercises
 - midterm exam
 - ...
- admission valid for only one year

Registration

- via RWTH Online
 - you automatically get access to RWTHmoodle, mailing list, ...
- no unified registration period
- ⚡ separate registration for exam!

Always go to the first lecture!

RWTH Online

Campus Management System

- overview of courses for...
 - the current semester
 - the whole master program
- registration for most modules & exams
- overview of grades
- calendar with your courses
- ...

URLs

- RWTH Online: <https://online.rwth-aachen.de>
- Manuals: <https://wiki-intern.rwth-aachen.de/display/RD/FAQ+for+Students>

Registration – Live Demo

RWTH Online – Test System

Electives

Exams

General Information

- written or oral
- 2 exams at end of semester
 - might differ in application area
- you cannot repeat passed exams
- after 3 failures: choose different elective

Registration

- separate registration for **each** exam
- standard registration periods
 - 1st exam: 1.4. – 15.7. / 1.10. – 15.12.
 - 2nd exam: until 7 days before the exam
- ⚡ Teachers may modify these dates!
- registration for 2nd exam after results of 1st exam were published

Deregistration – <https://www.rwth-aachen.de/go/id/eir/lidx/1>

Until 3 working days before. If you are ill...

- doctor's certificate issued on or before the day of the exam
- must indicate that you cannot take exams on that day
- ⚡ No “not fit for work” certificates!
- must be at ZPA on the 3rd working day after the exam

Electives

Central Examination Office Zentrales Prüfungsamt (ZPA)

What they do

- examination administration
- recording of grades
- exam registrations
- exam deregistrations / withdrawal
- admission check for thesis
- issues various certificates
- ...

Exam Registration – Live Demo

RWTH Online – Test System

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Seminar and Lab

What it is about

offered by all CS-chairs, various topics

Seminar

- independent work (with supervision)
- topic from the literature
- written report & presentation
- usually as “Blockseminar”
 - ↪ all talks within a few days after lecture period
- (rare) alternative: weekly meetings

Lab

- collaborate in small groups
- usually software projects
- details differ, depending on the organizer
- ⚡ No industry internships!

Organizational Matters

General Information

- starts with kickoff-meeting
 - seminar / lab passed ↪ you cannot take another one
 - withdrawal possible until 1 week after distribution of topics
- ⚡ 3 fails ↪ end of studies!

Registration – <https://supra.informatik.rwth-aachen.de/>

- central distribution system
- registration in June/July for winter term, December/January for summer term
- further information in kickoff-meeting

Focus Colloquium

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Focus Colloquium

What it is about

- oral exam
- 3 courses
- topics must be connected
 - electives you've done ✓
 - electives you've done during your bachelor ✓
 - electives you haven't done ✓ / ?
 - seminar ?
 - lab ?
 - courses from different professors ?
 - courses from different research groups ?
 - mandatory bachelor courses ✗

Why it is important

- “just” 3 CP
- ⚡ Counts **four-fold** for your final grade!

Finding & Registering a Topic

- ⚡ Start planning **now!**
- ⚡ Have a **plan B!**
 - contact professors – they must approve your choice of modules
- ⚡ Schedule in time!
 - registration by examiners

Course on Scientific Integrity

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Course on Scientific Integrity

<https://www.rwth-aachen.de/go/id/mylsw/lidx/1/>

- online course
- provided via Moodle
- exam
 - online
 - twice per semester
- mandatory for all master (and PhD) students
- required for registering your thesis

Thesis

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General Information

General Information

- thesis & presentation, 30 CP
- two reviewers
 - grade: average
- 6 months

Prerequisites

- ≥ 60 CP
- requirements
- course on scientific integrity

What if I fail?

- can be repeated **once**
- ⚡ You must register for a new thesis within 3 semesters!

Registration

- online, via request to the examination board
- examination board informs you about deadline

Finding a Topic

Where?

- CS professors only
- ⚡ no topics from industry
- ⚡ no topics from other departments
 - even if they advertise them...
 - rare exception: cross assignments
- typically within your “specialization”

How?

- check websites
- get in touch
- get connected
 - supervisor from seminar
 - supervisor from lab
 - become a student assistant

When?

- may take time
- may require training period
- ↪ start planning several months ahead

Pitfalls

- ⚡ popular specialization ↪ hard to find topics
- ⚡ professors / scientific staff may leave
- ⚡ Think about your specialization(s) **now!**
- ⚡ Have a **plan B!**
- last resort: request “support for finding a thesis” at examination board

Paperless – the Examination Board’s Online System

Paperless

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How it works

Choose non-CS modules from large catalog, including...

- Business Administration
- Electrical Engineering
- Mathematics
- Philosophy
- Mechanical Sciences
- Medical Sciences
- Physics
- Biology
- Chemistry
- Psychology
- . . .

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What they are

- Bachelor modules
- have to be done in addition to your master studies
 - no influence on standard period of study
- almost always in German

Practical Information

- listed in admission letter
- registration via RWTH Online
 - ⚡ exception: “elective course from Theoretical Computer Science”
 - ↪ register at ZPA
- no grades
- required for registering your thesis

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Voluntary Additional Courses

What can I choose?

arbitrary RWTH courses – if the examiners allow it

How does it count?

- grades on final certificate
- no impact on overall grade

Registration

- ideally via RWTH Online
- otherwise: get in touch with examiners
- **have to be declared at ZPA**
 - ⚡ until 1 week after you get your last grade

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- video introductions to electives
<https://sc.informatik.rwth-aachen.de/de/wahlpflicht/>
- RWTH Online
- group websites
<http://www.informatik.rwth-aachen.de/>
- unofficial info page
<https://rwthoffline.de/>
- Go to lectures at beginning of semester!

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Where?

Partner universities!

When?

- anytime
 - 4 semesters pass by quickly
- ↪ Start planning now!

How?

- learn teaching language
 - RWTH language center
- no extension of study duration – with good planning
 - transfer of credits
 - leave of absence
- dedicated academic advisor – `student-exchange@cs.rwth-aachen.de`

<https://www.comsys.rwth-aachen.de/teaching/outgoings/>

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- [mentor program](#)
 - registration via RWTH Online
- [Center of Studies – Computer Science](#)
- [mailing list](#)
 - `msinf@lists.rwth-aachen.de`
 - you're subscribed automatically
- [International Office](#)
 - webinars, social events, and much more for international students
- [Student Advice Center](#)
 - for questions that are not specific to your course of studies
 - workshops, talks, ...
- [Allgemeiner Studierendenausschuss](#)
 - university-wide student organization
- [Fachschaft](#)
 - student organization of the departments CS, Mathematics, and Physics
- [Computer Science Library](#)
- [Main Library](#)

Thank you for your attention

Any questions?