saarland-informatics-campus.de

MSc Computer Science: Welcome

UNIVERSITÄT
DES
SAARLANDES

SIC Saarland Informatics Campus

Summer Semester, 01.04.2025
Prof. Dr. Jan Reineke

Welcome at SIC

UNIVERSITÄT DES SAARLANDES

CBI CENTER FOR BIOINFORMATICS

M2CI CLUSTER OF EXCELLENCE

CISPA HELMHOLTZ CENTER FOR INFORMATION SECURITY

DFKI

max planck institut informatik

MAX PLANCK INSTITUTE FOR SOFTWARE SYSTEMS

About us - Research

- **4 informatics institutes** and
  3 collaborating departments on campus
- **2k+ students** from **80+ countries**
- **~ 74 research groups**, 500+ doctoral candidates
- **~ 800 scientists** at Saarland Informatics Campus
- 24 informatics study programs, **16 research fields**
- **6 Konrad Zuse** Medals
  39 ERC Grants
  7 Leibniz Awards

More about us:

https://saarland-informatics-campus.de/en/ueberuns-aboutus/

Your Studies at Saarland University

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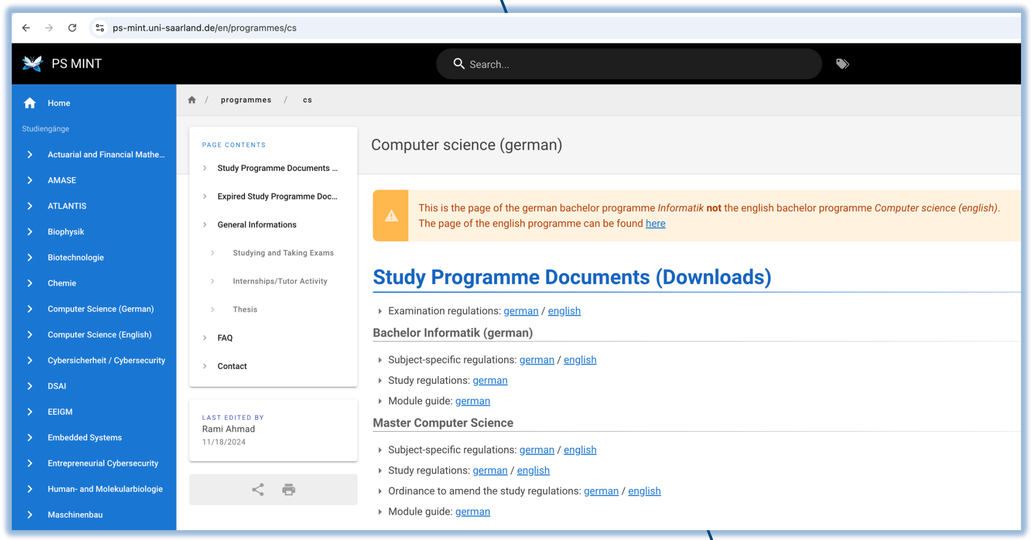
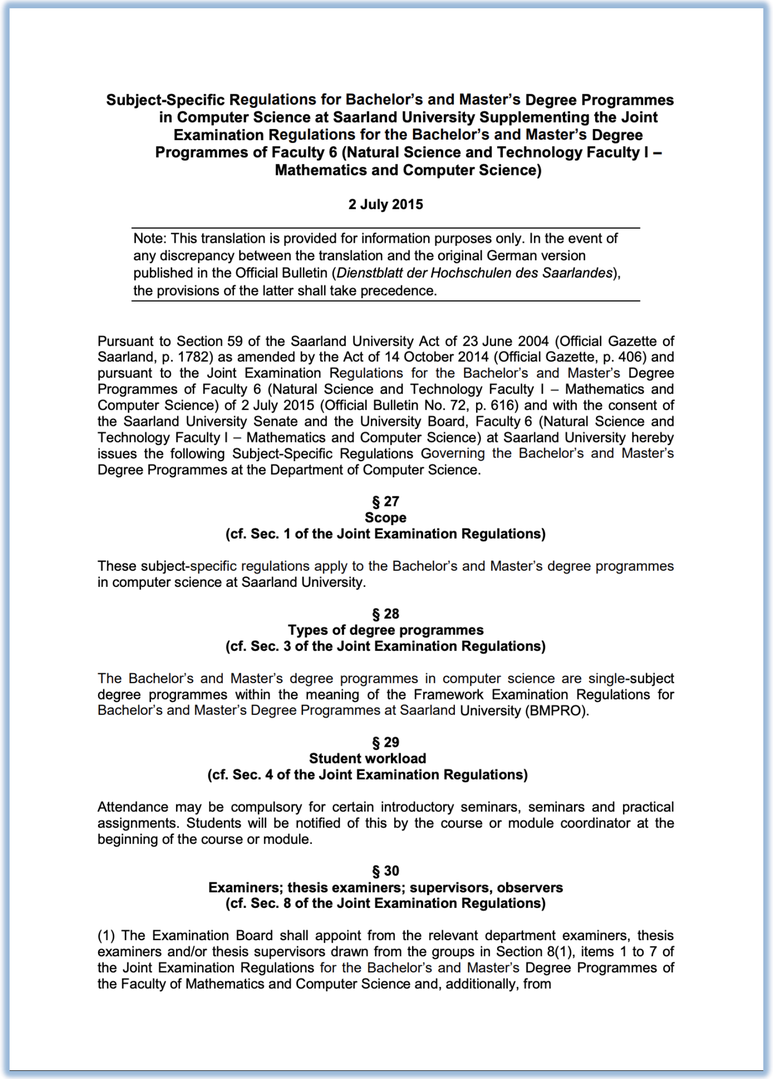


Study Regulations

Read your study documents carefully!



Subject-Specific Regulations for Bachelor's and Master's Degree Programmes in Computer Science at Saarland University Supplementing the Joint Examination Regulations for the Bachelor's and Master's Degree Programmes of Faculty 6 (Natural Science and Technology Faculty I – Mathematics and Computer Science)

2 July 2015

Note: This translation is provided for information purposes only. In the event of any discrepancy between the translation and the original German version published in the Official Bulletin (*Dienstblatt der Hochschulen des Saarlandes*), the provisions of the latter shall take precedence.

Pursuant to Section 59 of the Saarland University Act of 23 June 2004 (Official Gazette of Saarland, p. 1782) as amended by the Act of 14 October 2014 (Official Gazette, p. 406) and pursuant to the Joint Examination Regulations for the Bachelor's and Master's Degree Programmes of Faculty 6 (Natural Science and Technology Faculty I – Mathematics and Computer Science) of 2 July 2015 (Official Bulletin No. 72, p. 616) and with the consent of the Saarland University Senate and the University Board, Faculty 6 (Natural Science and Technology Faculty I – Mathematics and Computer Science) at Saarland University hereby issues the following Subject-Specific Regulations Governing the Bachelor's and Master's Degree Programmes at the Department of Computer Science.

§ 27
Scope
(cf. Sec. 1 of the Joint Examination Regulations)

These subject-specific regulations apply to the Bachelor's and Master's degree programmes in computer science at Saarland University.

§ 28
Types of degree programmes
(cf. Sec. 3 of the Joint Examination Regulations)

The Bachelor's and Master's degree programmes in computer science are single-subject degree programmes within the meaning of the Framework Examination Regulations for Bachelor's and Master's Degree Programmes at Saarland University (BMPRO).

§ 29
Student workload
(cf. Sec. 4 of the Joint Examination Regulations)

Attendance may be compulsory for certain introductory seminars, seminars and practical assignments. Students will be notified of this by the course or module coordinator at the beginning of the course or module.

§ 30
Examiners; thesis examiners; supervisors, observers
(cf. Sec. 8 of the Joint Examination Regulations)

(1) The Examination Board shall appoint from the relevant department examiners, thesis examiners and/or thesis supervisors drawn from the groups in Section 8(1), items 1 to 7 of the Joint Examination Regulations for the Bachelor's and Master's Degree Programmes of the Faculty of Mathematics and Computer Science and, additionally, from

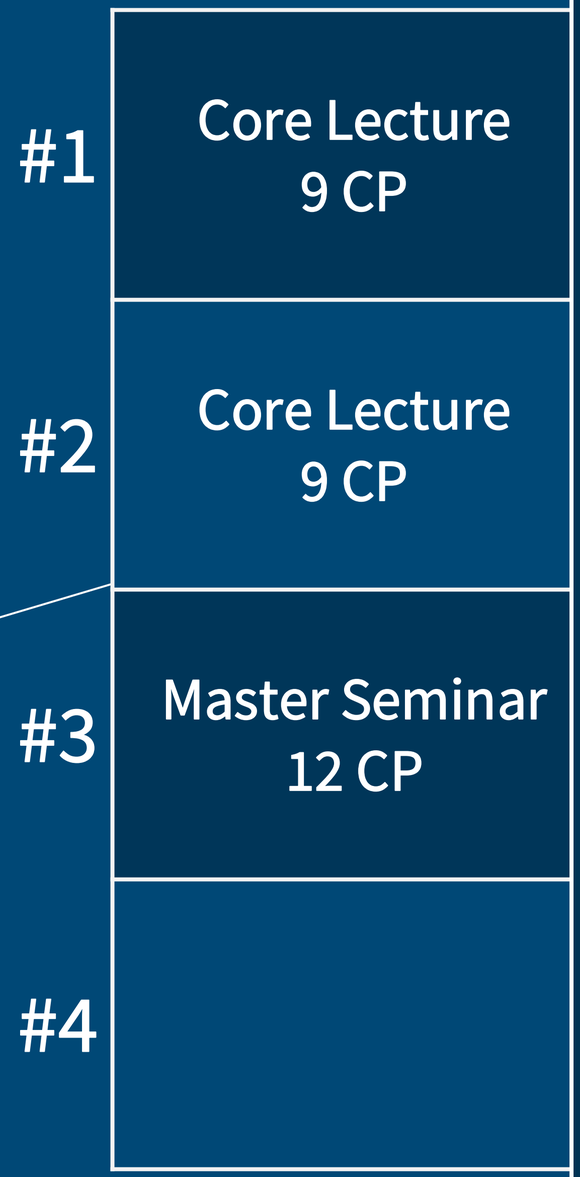
Study Regulations for Master's Program Computer Science

- **27 graded** credits in the category of **core lectures** in computer science
- **27–31 graded** credits in the categories of **core lectures, advanced lectures, or seminars** in computer science (here: at most 1 seminar!)
- **7 graded** credits in the category of **seminars** in computer science
- At least **17 ungraded credits** must be acquired by:
  - Further courses in computer science
  - Master practical training in research groups at CS department
  - Internship in a company (max. 6 CP); approved by the examination board
  - Leading a tutorial (tutor, 4 CP)
  - Language courses (max. 6 CP, living language)
  - Courses from other departments, which have been applied for and approved by the examination board (e.g. in mathematics, business informatics or computer linguistics)
- **12 graded** credits for the **Master's seminar** and **30 CP** for the **Master's thesis**

Example master's program Computer Science

#1	Core Lecture 9 CP	Core Lecture 9 CP	Advanced Course 6 CP	Language Course 6 CP	30 CP
#2	Core Lecture 9 CP	Core Lecture 9 CP	Seminar 7 CP	Advanced Course 6 CP	31 CP
#3	Master Seminar 12 CP	Advanced Course 6 CP	Advanced Course 6 CP	Advanced Course 6 CP	30 CP
#4	Thesis 30 CP				30 CP

Example master's program Computer Science



Credit Points Calculation

- 1 CP = 30 hours of work
- 30 CP = 900 hours of work
- 900/40* = 22.5 weeks of *full-time* work

* Assuming 40 hours of work per week

Example master's program Computer Science

#1	Core Lecture 9 CP	Core Lecture 9 CP	Advanced Course 6 CP	Language Course 6 CP	30 CP
#2	Core Lecture 9 CP	Core Lecture 9 CP	Seminar 7 CP	Advanced Course 6 CP	31 CP
#3	Master Seminar 12 CP	Advanced Course 6 CP	Advanced Course 6 CP	Advanced Course 6 CP	30 CP
#4	Thesis 30 CP				30 CP

Example Course List:
Core courses (offered at least every two years)

Algorithms and Data Structures
Data Networks
Artificial Intelligence
Operating Systems
Semantics
Automated Reasoning
Distributed Systems
Compiler Construction
Complexity Theory
Optimization
Computer Algebra
Machine Learning
Computational Logic
Computer Graphics
Embedded Systems
Cryptography
Data Base Systems
Security
Software Engineering
Digital Transmission, Signal Processing
Image Processing an Computer Vision
Human Computer Interaction
Verification

This term: Core courses

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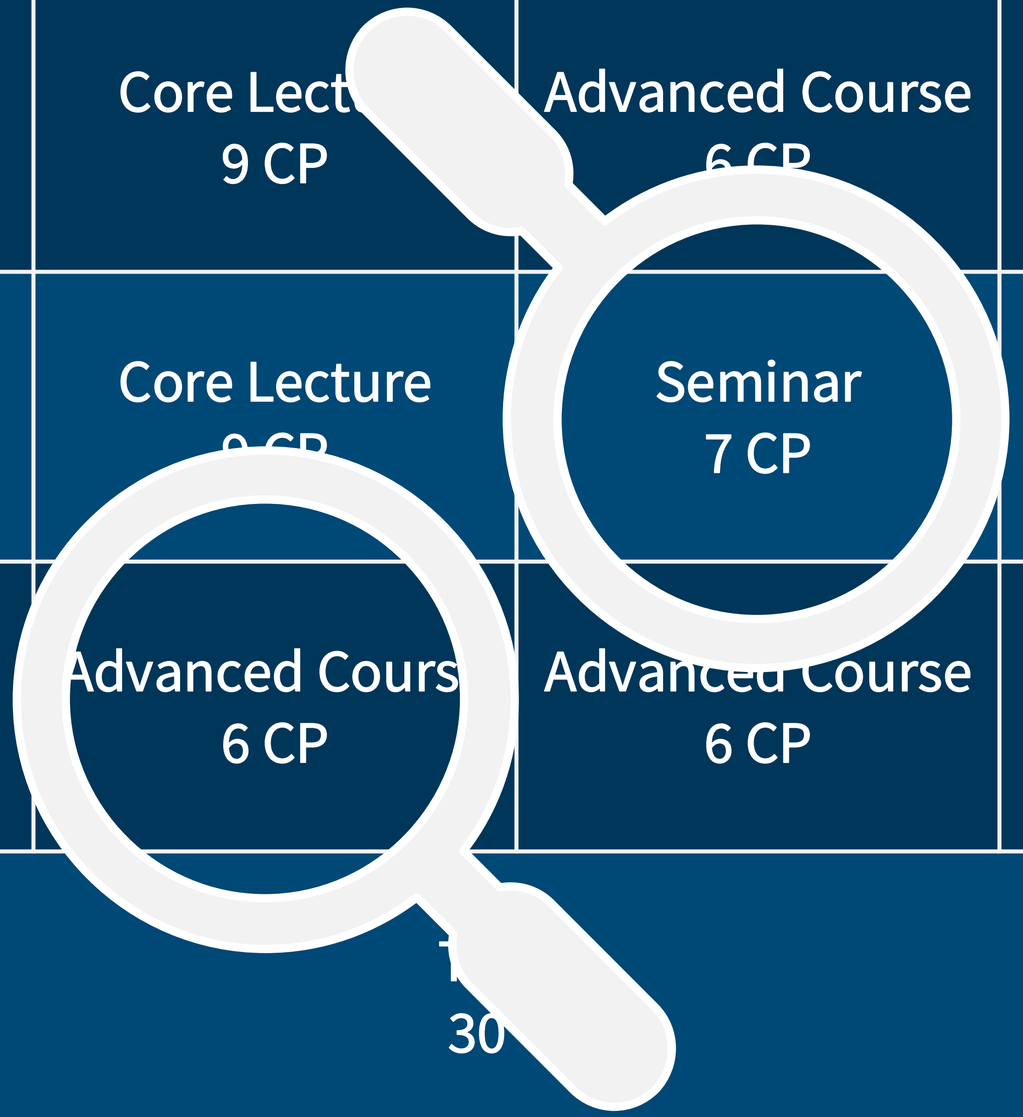
Core Lectures

Lect.-No.	Lecture	Type	Activity
156438	Cryptography - Hanzlik , Döttling	Lecture / Exercise/problem-solving class	
156439	Introduction to Computational Logic - Smolka	Lecture / Exercise/problem-solving class	
156440	Data Networks - Feldmann	Lecture / Exercise/problem-solving class	
156441	Machine Learning - Ochs , Mitarbeiter/-innen des Lehrstuhls	Lecture / Exercise/problem-solving class	
156443	Image Processing and Computer Vision - Weickert , Mitarbeiter des Lehrstuhls	Online-Vorlesung	
156472	Discrete Optimization (before Optimization) - Karrenbauer	Lecture / Exercise/problem-solving class	
156473	Distributed Systems - Druschel , Garg	Lecture / Exercise/problem-solving class	
156772	Cyber-Physical Systems (former Embedded Systems) - Maggio	Lecture / Exercise/problem-solving class	
157331	Verification - Kaminski	Lecture / Exercise/problem-solving class	
157953	Convex Analysis and Optimization - Ochs , Mitarbeiter des Lehrstuhls	Lecture / Exercise/problem-solving class	

Example master's program Computer Science

#1	Core Lecture 9 CP	Core Lect 9 CP	Advanced Course 6 CP	Language Course 6 CP	30 CP
#2	Core Lecture 9 CP	Core Lecture 9 CP	Seminar 7 CP	Advanced Course 6 CP	31 CP
#3	Master Seminar 12 CP	Advanced Cours 6 CP	Advanced Course 6 CP	Advanced Course 6 CP	30 CP
#4		1 30			30 CP



This term: Advanced courses + Seminars

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Advanced Lectures

Lect.-No.	Lecture	Type	Activity
155263	Machine Translation - van Genabith	Lecture / Exercise/problem solving class	
155272	Statistical Natural Language Processing - Klakow	Lecture	
155778	Digital Signal Processing / Digitale Signalverarbeitung - Klakow	Lecture	
156444	High Level Computer Vision - Schiele	Advance	
156445	Internet Transport (former: Multimedia Transport) - Herfet	Lecture	
156446	Realistic Image Synthesis - Slusallek	Advance	
156456	Trustworthy Machine Learning - Fritz , Dziedzic	Advance	
156458	Topics in Algorithmic Data Analysis - Vreeken	Advance	
156470	Interactive Systems - Steimle	Lecture	
156633	Causality for Complexity Theorists - Bläser	Advance	
156637	Building an 8-bit Computer from Scratch - Hack	Advance	
156744	Distibuted Graph Algorithms - Brandt	Advance	
157140	Foundations of Web Security - Stock	Advance	
157141	Attacks Against Machine Learning Models - Zhang	Advance	
157142	Cyber-Physical Systems Security (formally Physical-Layer Security) - Tippenhauer	Advance	
157168	Foundations of Firmware Security - Abbasi	Advance	
157220	Trusted AI Planning - Hoffmann	Advance	
157221	Privacy-Enhancing Technologies - Lueks	Advance	
157222	Algorithms for Cryptanalysis - Joux	Advance	
157224	Empirical Software Engineering Research - Apel	Advance	
157236	Spezialvorlesung der Bioinformatik: Algorithms for Sequence Analysis - Rahmann	Special l	
157295	Image Compression - Peter	Lecture	
157352	Numerical Algorithms for Visaul Computing - Weickert , Chizhov	Lecture	
157356	Intelligent Systems and Human Learning - Nagashima	Advance	
157399	Coinductive Proofs - Finkbeiner	Advance	
157411	Quantitative Model - Hermanns	Advance	
157621	Data Science - Maaß	Lecture	
157633	Recht der Cybersicherheit - Datenschutzrechtliche Aspekte - Mitarbeiter des Lehrstuhls , Sorge	Advance	
157635	IT-Forensics - Mitarbeiter des Lehrstuhls , Sorge	Advance	
158096	Image Compression - Peter , Mitarbeiter des Lehrstuhls	Lecture	
158150	Lectures on Modern Optimization Methods - Stich	Block le	

Seminars

Lect.-No.	Lecture	Type
155262	Machine Learning for Natural Language Processing - Klakow	seminar
155265	Multimodal Dialogue Systems - Petukhova	Block seminar
155267	Neural Networks in Brains and Computers - Hahn	seminar
155290	Defining and Measuring Abstract Concepts in NLP - Gautam	seminar
157150	Equality Saturation - Hack	seminar
157175	Data-driven Understanding of the Disinformation Epidemic (DUDE) - Zhang	seminar
157176	Coping with computational hardness: approximation, moderately exponential-time, and parameterized algorithms - Marx	seminar
157293	Politics of Security and Privacy - Krombholz	seminar
157294	Research Methods in Human-centric Security - Krombholz	seminar
157439	Verification of Distributed Systems - Jacobs	seminar
157546	Generative AI for Data Insights on SAP BTP (vormals "Data analysis on the SAP Business Technology Platform (SAP BTP)") - Loos , Berrang , Viswanthan	Lecture
157627	Imprecise Probabilistic Machine Learning - Muandet	seminar
157631	Advanced Topics in Program Analysis - Dimitrova	seminar
157650	Provable Security of Key Exchange Protocols - Cremers , Mitarbeiter/-innen des Lehrstuhls	seminar
157651	Cybersecurity in Organizational Practice - Stock , Golla , Mitarbeiter/-innen des Lehrstuhls	seminar
157652	The Web Security Seminar - Pellegrino , Fass , Staicu	seminar
157653	Wireless Security - Singh	seminar
157654	Privacy in Computations and Communications - Hanzlik , Sasy	seminar
157989	Sweat and Survive - The VR Edition - Krüger , Kosmalla	seminar
157990	Reliability in Modern Cloud Systems - Mitarbeiter/-innen des Lehrstuhls , Kaufmann, PhD	seminar
158114	Spatiotemporal Models and Inference - Wolf	Block seminar
158115	AI in the Global South - Weber , Cannanure	Block seminar
158116	Generative AI for Interactive Systems - Steimle , Schmitz , Ram	seminar
158117	AI Coding Assistants: Hype or Game Changer? - Apel	seminar
158119	GameCraft: Spielmechaniken und Spiele-Prototyping - Krüger , Lessel	seminar
158120	Privacy Engineering und Recht - Sorge	seminar
158121	Mechanism Design Without Money - Mehlhorn	seminar
158148	Research Project in "Technology and Self-Care" - Feit , Pissani	seminar

Course catalogue (LSF)

Course list (Core lectures)

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How to choose a lecture – example: ICL

Course Overview (**current semester**) View: > **short** > me

- **Vorlesungsverzeichnis**
  - **Mathematics and Computer Science**
    - **Computer Science**
      - **Courses on Computer Science**
        - **Core Lectures**

Lect.-No.	Lecture	Type
122116	Artificial Intelligence - Hoffmann , Koehler	Lecture / Exercise/problem-solving class
123525	Cryptography - Döttling	Lecture / Exercise/problem-solving class
123526	Introduction to Computational Logic - Smolka	Lecture / Exercise/problem-solving class
123531	Optimization - Karrenbauer	Lecture / Exercise/problem-solving class
123532	Embedded Systems	Lecture / Exercise/problem-solving class
123537	Data Networks - Feldmann	Lecture / Exercise/problem-solving class
123678	Image Processing and Computer Vision - Weickert , Mitarbeiter des Lehrstuhls	Lecture / Exercise/problem-solving class

Example !

Introduction to Computational Logic - Einzelansicht

Zurück

Funktionen: markierte Termine vormerken

Seiteninhalt: Grunddaten | Termine | Zugeordnete Person | Studiengänge | Hochschulstruktur | Inhalt | Strukturbaum

Grunddaten

Veranstaltungsart	Vorlesung / Übung	**Langtext**	
Veranstaltungsnummer	136477	**Kurztext**	
Semester	SoSe 2022	**SWS**	
Erwartete Teilnehmer/-innen		**Max. Teilnehmer/-innen**	
Turnus		**Veranstaltungsanmeldung**	Keine Veranstaltur
Credits			
Weitere Links	https://cms.sic.saarland/icl_22/		
Sprache	englisch		

Example !

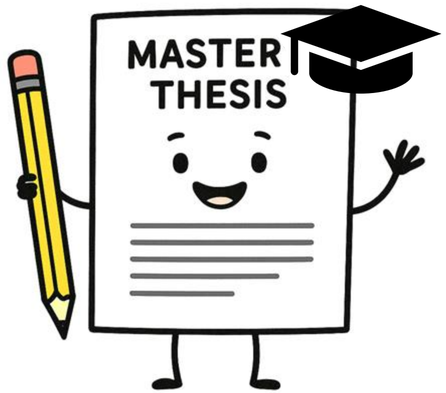
Please follow the instructions given on the webpage and/or join the first lecture

Termine Gruppe:

	Tag	Zeit	Turnus	Dauer	Raum	Raum-plan	Lehrperson	Status	Bemerk
	Mi.	12:00 bis 14:00	woch		Gebäude E1 3 - Hörsaal II (0.02.1)				
	Fr.	14:00 bis 16:00	woch		Gebäude E1 3 - Hörsaal II (0.02.1)				

#1	Core Lecture 9 CP	Core Lecture 9 CP	Seminar 7 CP	Language Course 6 CP	31 CP
#2	Core Lecture 9 CP	Core Lecture 9 CP	Advanced Lecture 6 CP	Tutoring 4 CP	28 CP
#3	Advanced Lecture 6 CP	Adv[illegible] Lecture	Seminar 7 CP	Master Seminar 12 CP	31 CP
#4		Thesis 30 CP			[illegible] CP

Master seminar & Master thesis



Master Seminar (12 ECTS)

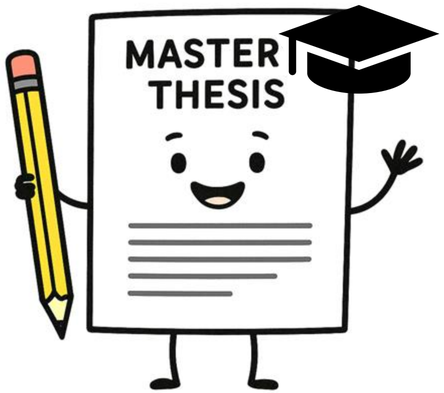
Objective: Prepares students for their Master's Thesis by introducing them to independent research and topic presentation

Typical requirements:

- *Presentation:* Students must give an oral presentation clearly outlining their intended thesis topic
- *Written Proposal:* A written description specifying the problem, objectives, and methodology must accompany the presentation

Timeline: The Master's thesis topic must be registered within one semester after successfully completing the Master Seminar; failure to meet this deadline will require attendance in a new seminar

Master seminar & Master thesis



Master Thesis (30 ECTS)

Objective: Demonstrates the student's ability to independently solve complex problems in *Computer Science* through original scientific work

Duration: The thesis must be completed within six months after official registration

Colloquium: A mandatory 30-minute colloquium (oral defense) must be completed within six weeks after thesis submission, validating the thesis as the student's own original work

Assessment and Grading: The thesis and colloquium are graded, significantly contributing to the overall Master's degree grade

Assessment and examination: academic integrity & original work

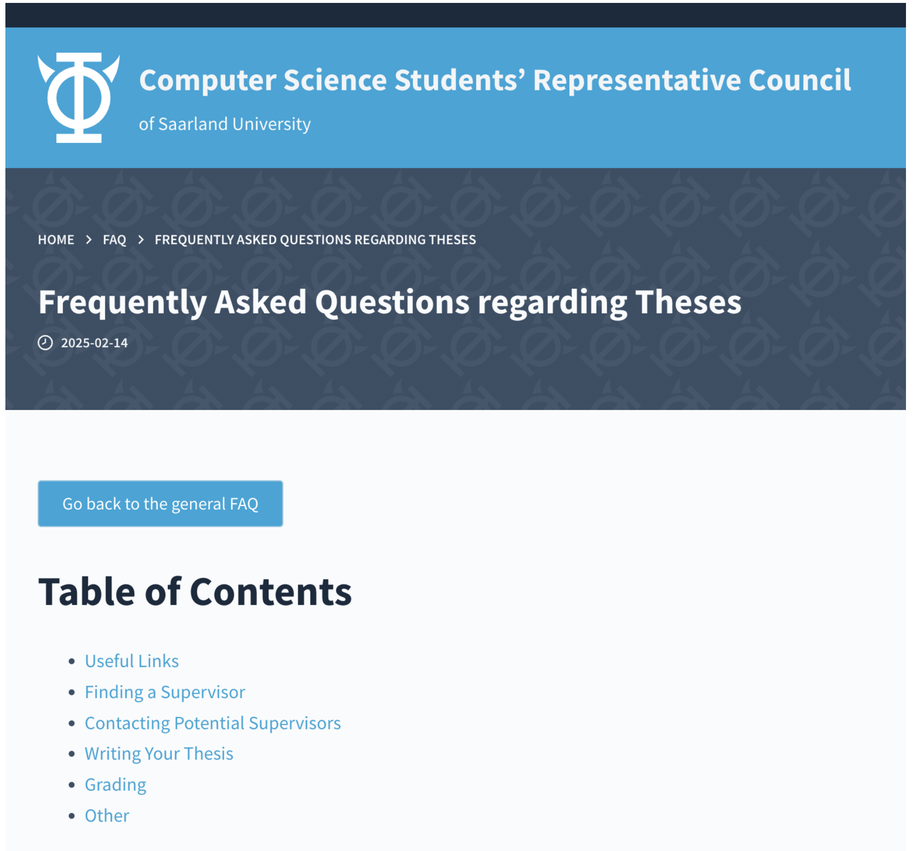
Written exams, oral exams, seminar presentations, and project work

➢ possibility to retake core lecture exams once, in the same semester to improve your grade

- **Originality:** All submitted work, particularly projects, theses, and seminar assignments, must reflect your own thoughts, analyses, and conclusions
- **Proper Citation:** Always acknowledge sources of ideas, data, code, images, or direct quotations clearly in accordance with academic standards
- **Zero Tolerance for Plagiarism:** Plagiarism can lead to severe academic penalties, including failing grades, suspension, or expulsion

Finding a thesis

- Choose your courses strategically
- Approach potential supervisors
- Special case: External thesis



https://cs.fs.uni-saarland.de/en/faq-thesis/

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