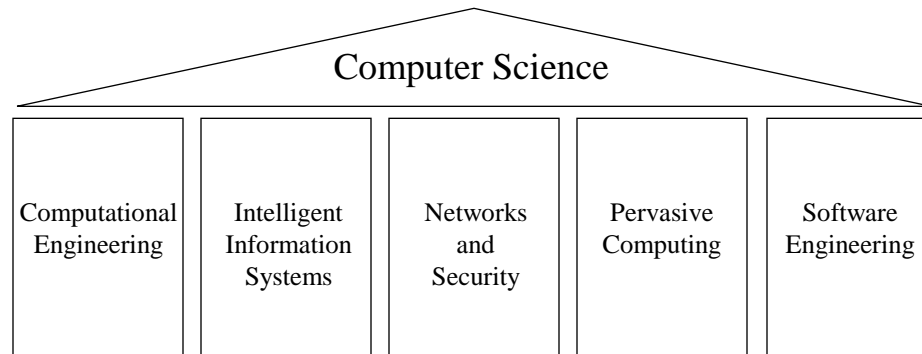


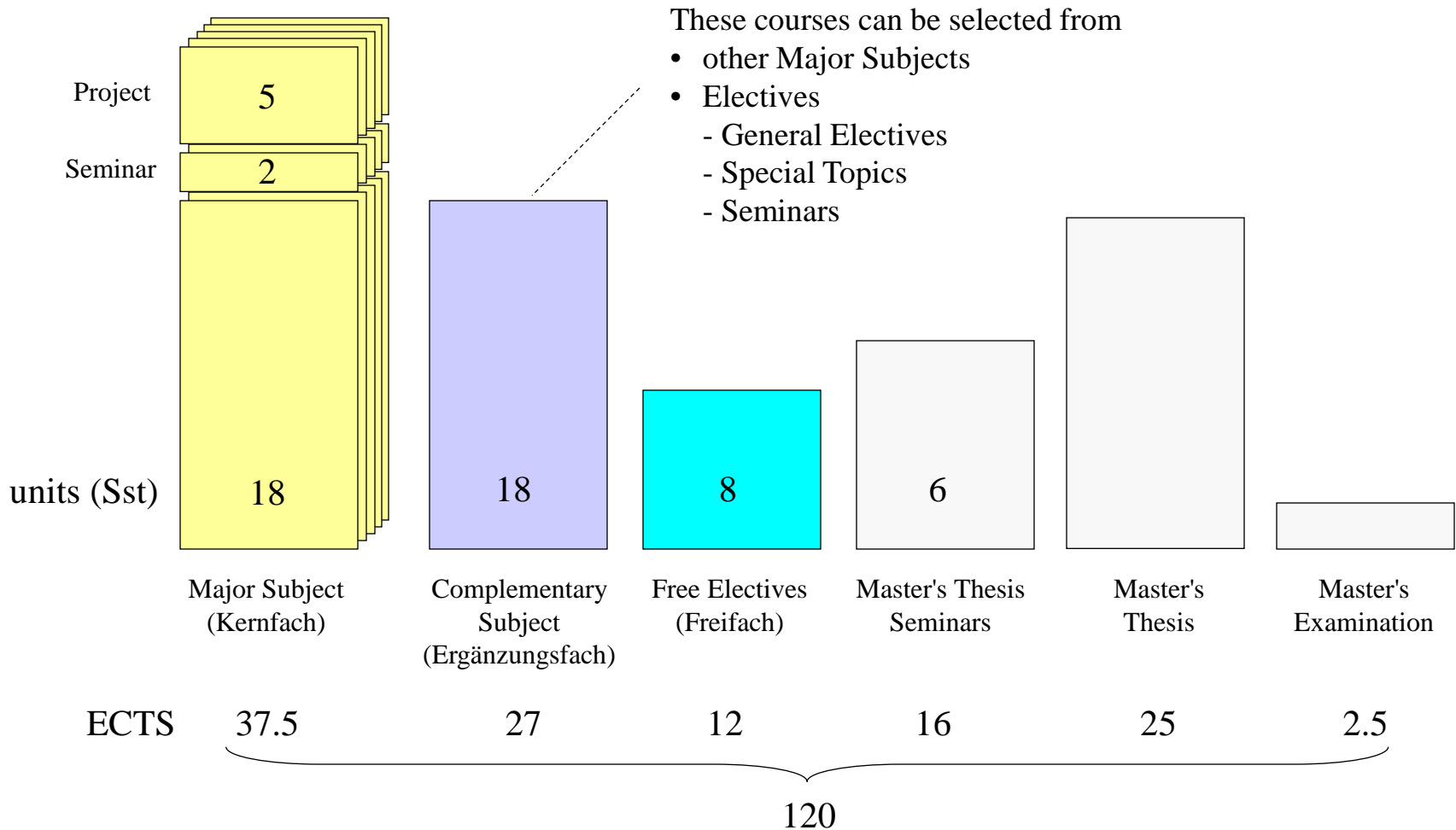
Master in Computer Science

WS 2013/14



- Single Master with 5 areas of specialization
- Completely in English
- Increased flexibility by more opportunities for selecting courses

Structure



Students have to select one of five Major Subjects as well as a Complementary Subject and Free Electives. They also have to do a Master's Thesis together with the Master's Thesis Seminars.

Major Subject (1)

Computational Engineering (*coordinator: Strumpen*)

Model Checking	3KV	Biere	WS
Machine Learning: Supervised Techniques	2VO+1UE	Hochreiter	WS
Probabilistic Models	2VO(+1UE)	Widmer	WS
System Software	2KV	Mössenböck	WS
Parallel Computing	3KV	Strumpen	SS
Hardware Design	2VO+1UE	Ostermann	SS
Computer Algebra for Concrete Mathematics	2VO(+1UE)	Paule	SS

Intelligent Information Systems (*coordinator: Wöβ*)

Knowledge Based Systems	2KV	Küng	WS
Information Retrieval and Extraction	2KV	Pröll	WS
Basic Methods of Data Analysis	2KV	Hochreiter	WS
Multimedia Search and Retrieval	3KV	Schedl, Knees	WS
Integrated Information Systems	2KV	Wöβ	SS
Learning from User-generated Data	3KV	Knees, Schedl	SS
Web Information Systems	3KV	Retschitz., Kaps.	SS
Accessible Software and Web Design	1KV	Miesenberger	SS

Pervasive Computing (*coordinator: Ferscha*)

Pervasive Computing: Systems and Environments	2VO+1UE	Ferscha	WS
Pervasive Computing: Design and Development	2VO+1UE	Ferscha	WS
Computer Vision	3KV	Bimber	WS
Principles of Interaction	2VO+1UE	Extern	SS
Principles of Cooperation	2VO+1UE	Kotsis	SS
Machine Learning and Pattern Classification	3KV	Widmer	SS

Major Subject (2)

Networks and Security (*coordinator: Sonntag*)

Introduction to IT Security	2VO	NN+Eschelbeck	WS
Information Security Management	2VO	NN	WS
Computer Forensics and IT Law	2VO	Sonntag	WS
System Administration	2KV	Hörmanseder	WS
Systems Security	2KV	Eschelbeck	SS
Secure Code	1KV	König (Sonntag)	SS
Network Management	2KV	Hörmanseder	SS
Network Security	1KV	Hörmanseder	SS
Cryptography	2KV	Scharinger	SS
Security Models in Information Systems	2KV	Küng	SS

Software Engineering (*coordinator Mössenböck*)

Formal Methods in Software Development	3KV	Schreiner	WS
Requirements Engineering	2KV	Grünb., Pomberger	WS
Principles of Programming Languages	2KV	Blaschek, Prähofer	WS
System Software	2KV	Mössenböck	WS
Software Architectures	3KV	Blaschek, Weinreich	SS
Model-driven Engineering	2KV	Egyed, Grünbacher	SS
Software Testing	2KV	Plösch, Sametinger	SS
Software Processes and Tools	2KV	Grünbacher, Egyed	SS

Electives

General Electives

- Courses have explicit names and are listed in the curriculum
- Must be offered regularly (at least every two years)

Special Topics

- Need not be offered regularly
- Have a subtitle that is not listed in the curriculum
- Used for current trends and guest courses

Special Topics: ...

Seminars

- Need not be offered regularly
- Have a subtitle that is not listed in the curriculum

Seminar in Computational Engineering: ...
Seminar in Intelligent Information Systems: ...
Seminar in Networks and Security: ...
Seminar in Pervasive Computing: ...
Seminar in Software Engineering: ...

General Electives (1)

Machine Learning: Unsupervised Techniques	2VO+1UE	Hochreiter	E	BIO
Sequence Analysis and Phylogenetics	2VO+2UE	Hochreiter	E	BIO
Theoretical Concepts of Machine Learning	2VO+1UE	Bodenhofer	E	BIO
Introduction to R	2KV	Bodenhofer	E	BIO
Computer Architecture 2	3KV	Strumpfen	E	ICA
Statistik 2	2KV	Forstner	D	ICA
Information Displays	2VO	Bimber	E	CG
Information Visualization	3KV	Streit	E	CG
Visual Analytics	2VO	Streit	E	CG
Probabilistic Models	1UE	Korzeniowski	E	CP
Biometrische Identifikation	2VO	Scharinger	D	CP
Digitale Bildverarbeitung	2KV	Scharinger	D	CP
Conceptual Data Modeling	2KV	Wöß	E	FAW
Semantic Data Modeling an Applications	2KV	Wöß	E	FAW
Application Oriented Knowledge Processing	2KV	Küng	E	FAW
Web Search and Mining	2KV	Pröll	E	FAW
Web Engineering	2KV	Pröll	E	FAW
Ethics and Gender Studies	2VO	NN	E	FGF
Soziale und geschlechterspezifische Aspekte der IT	2KS	NN	D	FGF
Gender Studies Managing Equality TN	2KV	NN	E	FGF
Sicherheit in Applikationsprotokollen	1KV	Dietmüller	D	FIM
Hardwareorientiertes Arbeiten an PCs	2PR	Bauer	D	FIM
Wireless LANs	1KV	Praher/Hörmanseder	E	FIM
Web Security	2KV	Sonntag	E	FIM
Cloud Security	2KV	Eschelbeck	E	FIM

General Electives (2)

Advanced Model Checking	2KV	Biere	E	FMV
Debugging	2KV	Seidl	E	FMV
Assistive Technologies and Accessibility	2KV	Miesenberger	E	IIS
Web Usability	1KV	Miesenberger	E	IIS
Design of Integrated Circuits	2PR	Ehrenstorfer	E	RIIC
Hardware Design with Programmable Logic	2KV	Möstl	E	RIIC
VLSI Design	2KV	Rauchenecker	E	RIIC
Computer Algebra for Concrete Mathematics	1UE	Paule	E	RISC
Formal Semantics of Programming Languages	2VO	Schreiner	E	RISC
Automated Reasoning	2VO+1UE	Jebelean/Kutsia	E	RISC
Computer Algebra	2VO+1UE	Winkler	E	RISC
Design and Analysis of Algorithms	2VO	Rolletschek	E	RISC
Engineering of Software-intensive Systems	2KV	Egyed	E	SEA
Product Line Engineering	2KV	Grünbacher	E	SEA
Advanced Compiler Construction	2KV	Mössenböck	E	SSW
Human/Computer Interaction	2VO	Blaschek	E	SSW
Modeling and Computer Simulation	2KV	Prähofer	D	SSW
Capacity Planning	2KV	Kotsis	E	TK
Mobile Computing	2KV	Khalil	E	TK
Modeling Internet Applications	2KV	Schwinger	E	CIS
Advanced Model Engineering	2KV	Retschitz./Kapsam.	D	CIS
Cooperative Information Systems	2KV	Retschitz./Kapsam.	D	CIS

47 courses

Recommended Course of Study

1. Sem		2. Sem		3. Sem		4. Sem	
Major Subject	13.5	Major Subject	13.5	Master's Thesis	8.5	Master's Thesis	16.5
Complementary Subject	13.5	Complementary Subject	13.5	Major Subject (Seminar and Project)	10.5		
Free Electives	3	Free Electives	3	Master's Thesis Seminar	8	Master's Thesis Seminar	8
	30		30		30		30

Transitional Provisions(1)

Students enrolled in the Master's programme 2012 on October 1, 2013 can continue with this programme **until September 30, 2015**. If they have not completed their study until then, they are transferred to the new curriculum according to the following arrangements:

Global accreditation

2012	2013
Everything except Master's Thesis and Master's Thesis Seminars Complete "Kernfach"	Everything except Master's Thesis and Master's Thesis Seminars Complete Major Subject (Informatik => Computational Engineering)

Accreditation of individual courses

2012	2013
Course from Kernfach X	Course from Major Subject X if not existing => any other course from Major Subject X (Informatik => Computational Engineering)
Course from Nebenfach	Course from Complementary Subject
Course from Vertiefung	Course from Complementary Subject

Transitional Provisions(2)

Equivalences for renamed Kernfach courses (deutsch <-> englisch)

2012		2013	
Software-Architekturen	3KV	Software Architectures	3KV
Hardwareentwurf	2VO+1UE	Hardware Design	2VO+1UE
Cooperative Systems	2VO+1UE	Principles of Cooperation	2VO+1UE
Einführung IT-Sicherheit	2VO	Introduction to IT Security	2VO
IT-Recht und Computerforensik	2VO	Computer Forensics and IT Law	2VO
Systemadministration	2KV	System Administration	2KV
Sicherheitsmodelle in Informationsss.	2KV	Security Models in Information Systems	2KV
Pervasive Comp. Infrastructure	2VO+1UE	Pervasive Comp.: Systems and Environments	2VO+1UE
Pervasive Comp. Systems Development	2VO+1UE	Pervasive Comp.: Design and Development	2VO+1UE
Unconventional User Interaction	2VO+1UE	Principles of Interaction	2VO+1UE
Mixed Reality Systems	3KV	Modelling and Computer Vision	3KV
Testen von Softwaresystemen	2KV	Software Testing	2KV
Software-Prozesse und -Werkzeuge	2KV	Software Processes and Tools	2KV

Transitional Provisions(3)

Equivalences for eliminated, shortened or extended Kernfach courses

2012		2013	
Knowledge-centered Systems	3KV	Knowledge Based Systems or Information Retrieval and Extraction or Integrated Information Systems Accessible Software and Web Design	2KV 1KV
Netzwerk-Management	3KV	Network Management Network Security	2KV 1KV
Kryptographie	3KV	Cryptography Secure Code	2KV 1KV
Informationssicherheitsmanagement Vertiefungs-LVA	1VO 1??	Information Security Management	2VO
Prinzipien von Programmiersprachen	3KV	Principles of Programming Languages Arbitrary course from Electives	2KV 1??

The following courses from category "Vertiefung" become Major Subject courses

2012 (Vertiefung)		2013 (Major Subject)	
System Software	2KV	System Software	2KV
Barrierefreie Systementwicklung	2KV	Accessible Software and Web Design Arbitrary course from Electives	1KV 1??
Secure Code	1KV	Secure Code	1KV
Model Engineering	2VO	Model-driven Engineering	2KV