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# Heidelberg University Examination Rules and Regulations for the Bachelor's Degree Programme

- Specific Section -

### in Computational Linguistics

of 26 March 2015

### § 1 Applicability of the General Section

The Heidelberg University examination rules and regulations for the Bachelor's programmes in modern languages and literature studies at the Faculty of Modern Languages - General Section -, as amended, form an integral part of these examination rules and regulations.

### § 2 Subject of the academic programme

- (1) The requirements for admission to the academic programme may be subject to separate admission regulations.
- (2) The subjects of the Bachelor's degree programme in computational linguistics are the theoretical and applied principles of computational linguistics. Students are to acquire a basic knowledge of the formal, linguistic and computer science principles of computational language processing, and a fundamental understanding of the specific issues, problem-solving strategies and empirical methods of computational linguistics. The Bachelor's degree programme aims to enable students to independently apply research results in computational linguistics to subject-related problems and issues, thus the foundations needed for a qualified career in computational linguistics.

### § 3 Programme structure and possible combinations

- (1) The academic programme is structured in accordance with § 3 para. 2 of the General Section of the Bachelor's examination rules and regulations of the Faculty of Modern Languages. The modules and affiliated courses to be completed are listed in Annex 1.
- (2) Heidelberg University offers the computational linguistics degree programme as a major subject accounting for 75% (113 CP) of the degree, or as a 1st or 2nd major subject accounting for 50% (74 CP) of the degree or minor subject accounting for 25% (35 CP) of the degree, to be combined with a second subject. Alternatively, the degree programme may also be chosen as a core

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subject with computer science as the supplementary subject, accounting for 100% (148 CP) of the degree.

- (3) The orientation examination is held during the course of study. For core subject (100% option), major subject (75% option), 1st or 2nd major subject or minor subject students, it consists of the successful completion of an introductory lecture course in computational linguistics, and, additionally, the successful completion of a programming course for core subject (100% option), major subject (75% option) and 1st and 2nd major subject (50% option) students.
- (4) In accordance with § 3 para. 7 of the General Section, a work placement lasting at least six weeks is mandatory for major and core subject students (75% and 100% option) and may be chosen as an Interdisciplinary Skills compulsory elective module by 1st or 2nd major subject students (50% option). The placement must take place during semester breaks at any private or public organisation suited to provide the student with work experience in his or her major or minor subject's fields of application. Organisations are chosen with the consent of the examinations board. A written report must be provided following the conclusion of the placement.
- (5) The following language skills are required for the completion of the computational linguistics Bachelor's degree programme as a major or core subject (75% and 100% option), 1st or 2nd major (50% option) or minor subject (25% option): English technical language proficiency at B2 "independent language use" level as defined by the Common European Framework of Reference for Languages of the Council of Europe. In the major and core subject (75% and 100% option), 1st or 2nd major (50% option), proficiency in one other modern or historical language at B1 "Independent language use" level as defined by the Common European Framework of Reference for Languages of the Council of Europe. In the major and core subject (75% and 100% option), 1st or 2nd major (50% option), proficiency in one other modern or historical language at B1 "Independent language use" level as defined by the Common European Framework of Reference for Languages of the Council of Europe is required alongside the student's mother tongue and English. Proof of proficiency must be submitted in the form of relevant certificates or language examinations at the required level upon admission to the Bachelor's thesis at the latest.
- (6) Generally, the subjects of the Bachelor's programmes may be freely combined, provided that the respective programmes are offered. Choosing a supplementary subject other than computer science as the core subject requires the consent of the examinations board.
- (7) Notwithstanding § 8 para. 2 of the General Section of the examination rules and regulations, it is possible to withdraw from an examination during the regular period for examination registration and deregistration only. Withdrawals from the examination after this period may exclusively be granted in accordance with § 8 para. 3 of the Specific Section.

### § 4 Requirements for admission to the Bachelor's examination

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In accordance with § 13 para. 3 of the General Section, students seeking admission to the Bachelor's examination must furnish additional certificates confirming the award of 90 credits for the successful completion of the modules and courses set forth under Annex 1 in the computational linguistics degree programme if it accounts for 75% or 100% of the degree or 64 credits if computational linguistics accounts for 50% of the degree, as well as the required language skills set forth under § 3 para. 5.

### § 5 Final examination

The B.A. final examination is an oral examination, which is held in the major or core subject (75% or 100% option). Further details are subject to § 18 of the General Section of the Bachelor's examination rules and regulations, and § 7 of these examination rules and regulations.

### § 6 Bachelor's examination

- (1) The processing period (from the date of topic assignment to the submission of the thesis) is limited to a maximum of three months. The examinations board may extend the deadline by up to 3 weeks in exceptional cases. If the thesis is not submitted in due time, it will be graded as "insufficient", unless the examinee is not responsible for exceeding the deadline.
- (2) The Bachelor's thesis may be written in German or English; the thesis must contain a summary in the other language, respectively. Upon the consent of the examinations board, the Bachelor's thesis may be written in another language.

# § 7 Oral final examination

- (1) The oral final examination lasts about 30 minutes. The oral final examination is held in German. In exceptional cases, the examination may be held in English. It consists of a colloquium on the Bachelor's thesis and related topics.
- (2) 7 credits are awarded for passing the oral final examination in the computational linguistics degree programme.

### § 8 Calculation of subject grades and overall grade

- (1) To calculate the subject grade pursuant to § 19 of the General Section, the module grades of the modules marked accordingly under Annex 1 are combined.
- (2) One subject grade is awarded for the core and the supplementary subject, respectively; it is calculated in the same way as the subject grades pursuant to § 12 of the General Section.

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Individual modules may be excluded from the calculation of the subject grade at the student's option. The total number of major subject modules included in the calculation may be reduced by a maximum of 24 credits in the major or core subject (75% or 100% option), and by a maximum of 12 credits in the 1st or 2nd major subject. In the minor subject (25% option), the total number of modules to be included in the calculation may be reduced by a maximum of 6 credits, and by a maximum of 8 credits in the supplementary subject. The Bachelor's thesis module, oral final examination module, and software project module may not be excluded from the calculation.

(3) The overall grade is calculated in accordance with § 19 para. 3 of the General Section.

### § 9 Entry into force

- (1) These examination rules and regulations become effective on the first day of the month following their publication in the President's bulletin (Mitteilungsblatt des Rektors). They simultaneously supersede the Heidelberg University examination rules and regulations -Specific Section - for the Bachelor's degree programme in computational linguistics of 8 January 2009 (President's bulletin dated 30/01/09, p. 177).
- (2) Upon request, the examination rules and regulations in the version of 8 January 2009 may be applied for eight more semesters to students already enrolled in the Bachelor's degree programme in computational linguistics at Heidelberg University on this date.

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Annex 1: Module structure of the Bachelor's degree programme in computational linguistics

- 1. Computational linguistics: Major subject (75%) (short: "75%")
- 2. Computational linguistics: 1st and 2nd major subject (50%)

(short:"50%")

- 3. Computational linguistics: Minor subject (25%) (short: "25%") (short "100%")
- 4. Computational linguistics (100%)
  - a. Core subject
  - b. Supplementary field

Key:

CM = Compulsory module; CEM = Compulsory elective module; EM = Elective module

- L = Lecture course; PS = Preparatory seminar; MS = Main seminar,
- PC = Practice class; Tut = Tutorial, Coll = Colloquium, INS = Independent study

P/R = Preparation / review

IS = Interdisciplinary Skills

**CP** = **Credit** points

CL: Computational Linguistics

CS: Computer Science

FL: Formal Linguistics

AC: Applied Computational Linguistics

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Module overview: Major subject (75% option)  $\rightarrow$  113 CP (plus 12 CP Bachelor's thesis in major subject plus 20 CP IS plus 35 CP minor subject)

Semester	Computational linguistics modules Linguistic modules		Computer science modules		Interdisciplinary Skills	
6	Computational		BA thesis (12 CP, Oral examination (7 C	CM) CP, CM)		
5	Colloquium (2 CP, CM)	Advanced Stu Advanced Stu	Advanced Studies (CL) (8 CP, CEM) or Advanced Studies (FL) (8 CP, CEM)		Software Project (6	20 CP from the range of Interdisciplinary skills
4	Core Studies	s in Computational Linguistics (30 CP, CM) (5 x 6 CP)		Core Studies in CS (8 CP, CM)	CP CL + 4 CP IS, CM)	
3	Statistical Methods for CL (6 CP, CM)		Formal Semantics (6 CP, CM)			
2		Formal Founda- tions: Mathemati- cal and Logical Foundations	Formal Syntax (6 CP, CM)	X Advanced Programming for CL (6 CP, CM)		
1	Introduction to CL (6 CP, CM)	(12 CP, CM)	Foundations of Linguistic Analysis (4 CP, CM)	Introduction Programming (6	n to CP, CM)	

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Module overview: 1st and 2nd major subject (50% option)  $\rightarrow$  74 CP (plus 12 CP BA thesis in 1st major subject plus 20 CP IS (10 CP per subject) plus 74 CP in other major subject)

Semester	Computational linguistics modules Linguistic modules		Linguistic modules	Computer science modules	Interdisciplinary Skills
		BA thesis in 1st major subject (12 CP, CM)			
6	Computational Linguistics Colloquium (2 CP. CM)	Advanced Studies (CL) (8 CP, CEM) or Advanced Studies (FL)			-
5	Statistical Methods for	Base Studies in Co	8 CP, CEM)	Software Project	10 CP from range of Interdisciplinary Skills
4	(6 CP, CM)	СР, СМ)		(6 CP CL + 4 CP IS, CM)	
3			Formal Semantics (6 CP, CM)		
2		Formal Founda- tions: Mathemat- ical and Logical	Formal Syntax (6 CP, CM)	Advanced Programming for CL (6 CP, CM)	
1	Introduction to CL (6 CP, CM)	(12 CP, CM)	Foundations of Linguistic Analysis (4 CP, CM)	Introduction to Programming (6 CP, CM)	

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### Module overview: Minor subject computational linguistics (25% option) $\rightarrow$ 35 CP

### In the minor subject, applied computational linguistics (AC) or formal linguistics (FL) must be chosen as a special field.

To choose "Applied computational linguistics" (AC) as the special field, the modules marked "AC" must be selected. To choose "Formal linguistics" (FL) as the special field, the modules marked "FL" must be selected.

Semester	Computational linguistic	ics modules	Linguistic module	es	Computer science modules
6	Base Studies	Studies in Formal Lin in Applied Computati	guistics (7 CP, CEM; FL) onal Linguistics (7 CP, CEI	И; AC)	
5	Statistical M (6 CP,	Methods for CL CEM; AC)	Formal Semantics (6 CP, CEM; FL)		
4					
3	Formal Founda- tions: Mathemat- ical Foundations (6 CP, CEM; AC)	ormal Foundations: lathematical Foun- dations (6 CP, CEM; FL)			
2	Fo	or ormal Foundations: ogical Foundations (6 CP, CEM; FL)	Formal Syntax (6 CP, CEM; FL)		
1	Introduction to CL	(6 CP, PM)	Foundations of Linguist CP, CM)	ic Analysis (4	Introduction to Programming (6 CP, CEM; AC)

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Module overview: Core subject computational linguistics (100% option)  $\rightarrow$  113 CP in core subject plus 12 CP BA thesis plus 35 CP in supplementary field plus 20 CP IS

Semester	Computationa	l linguistics modules	Linguistic modules	Computer science modules		Supplementary subject	Interdisciplinary Skills
6	Computational Linguistics Colloquium		BA thesis (12 CP, CM Oral examination (7 C				
5	(2 CP, CM)	Advanced Stud Advanced Stud	dies (CL) (8 CP, CEM) or dies (FL) (8 CP, CEM)		Software Project (6	Supple- mentary field modules (see	20 CP from range of Interdisciplinary Skills
4	Core Studie	s in Computational Lin 6 CP)	Computational Linguistics (30 CP, CM) (5 x 6 CP)		+ 4 CP IS, CM)	CL below) (35 CP) CP CM)	
3	Statistical Methods for CL (6 CP, CM)		Formal Semantics (6 CP, CM)				
2		Formal Founda- tions: Mathemati- cal and Logical	Formal Syntax (6 CP, CM)	Advanced Programming for CL (6 CP, CM)			
1	Introduction to CL (6 CP, CM)	(12 CP, CM)	Foundations of Linguistic Analysis (4 CP, CM)	Introduction to Programming (6 CP, CM)			

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### Module overview: Supplementary field *computer science* $\rightarrow$ 35 CP

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Semester	Supplementary subject: Computer science									
6	Choice of courses from Bachelor's modules and Master's modules declared as suitable for Bachelor's programme (16									
5	CP, CEM) ***									
4		Introduction to theoretical computer science (8 CP, CEM) *	Core Studios in							
3	Preparatory seminar (3 CP)		CS (CM, 8 CP) **							
2		Introduction to technical computer science (8 CP, CEM) *								
1										

All listed supplementary subject courses are relevant for the calculation of the subject grade; section 8 para. 3, however, will be taken into consideration. Detailed module descriptions can be found in the "Applied Computer Science" Bachelor's examination rules and regulations.

\* Compulsory elective: Either "Introduction to theoretical computer science" or "Introduction to technical computer science"

\*\* The course selected for the core subject may not be selected for the supplementary subject (and vice versa).

\*\*\* It is recommended to focus on the following courses:

- Complexity problems (e.g. computability, automata theory, parallel computing)
- Multimodal technologies (e.g. signals and systems)
- Databases and information systems (e.g. architecture of database systems, web-based information systems)
- Practical software courses

# List of mentioned sub-disciplines:

### Sub-disciplines of theoretical computational linguistics:

- Automata theory
- Graph theory
- Inference methods
- Linguistic representations
- Machine learning
- Formal languages and grammars

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- Statistical language processing methods
- Algorithmic language-processing methods
- Further related areas
- Sub-disciplines of applied computational linguistics
- Information extraction
- Information retrieval
- Machine translation
- Question-answering systems
- Dialogue systems
- Learning systems
- Natural language understanding
- Artificial intelligence and knowledge representation
- Phonetics
- Language recognition and speech synthesis
- Special topics in algorithmic processing
- Further related areas

### Sub-disciplines of formal linguistics

- Linguistic theories of grammar
- Special topics in formal syntax, semantics, discourse and dialogue semantics, pragmatics, morphology and phonology
- Further related areas

### Sub-disciplines of applied linguistics

- Language-learning systems
- Induction, acquisition and formal representation of linguistic resources
- Cognitive linguistics
- Contrastive linguistics
- Corpus linguistics
- Further related areas

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Module descriptions:

# **Basic modules – computational linguistics**

Introduction to Computational Linguistics  $\rightarrow$  Relevant for subject grade: no

Module and affiliated course	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP		Total CP	Reference
Introduction to Computational Linguistics	100%: CM 75%: CM 50%: CM 25%: CM	100%: 1st sem. 75%: 1st sem. 50%: 1st sem. 25%: 1st sem.		4			6	
Introduction to Computational Linguistics			L	4	Contact P/R/Tut Written examination	2 2 2	6	ICL

### Formal Foundations of Computational Linguistics: Mathematical and Logical Foundations → Relevant for subject grade: yes

Module and affiliated course	Module type	Recommended	Туре	Sem.	Breakdown of total CP		Total	Reference
	and use	semesters		hrs.			СР	
Formal Foundations of	100%: CM	100%: 1st + 2nd sem.		4			12	
Computational Linguistics:	75%: CM	75%: 1st + 2nd sem.						
Mathematical and Logical	50%: CM	50%: 1st + 2nd sem.						
Foundations								
Formal and mathematical basic		100%: 1st sem.	L	2	Contact	1	6	FF-FM
principles of computational		75%: 1st sem.			P/R/Tut	3		
linguistics		50%: 1st sem.			Written/oral examination	2		
Principles of formal logic for		100%: 2nd sem.	L	2	Contact	1	6	FF-L
computational linguists		75%: 2nd sem.			P/R/Tut	3		
		50%: 2nd sem.			Written/oral examination	2		

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Formal Foundations of Computational Linguistics: Mathematical Foundations  $\rightarrow$  Relevant for subject grade: yes

Module and affiliated	Module type and	Recommended	Туре	Sem.	Breakdown of total CP		Total	Reference
courses	use	semesters		hrs.			СР	
Formal Foundations of	25%: CEM	25%: 3rd sem.		2			6	
Computational Linguistics:	(Mandatory if AC							
Mathematical Foundations	chosen as special field;							
	alternative option to							
	FF-L if FL chosen as							
	special field)							
Formal and mathematical basic			L	2	Contact	1	6	FF-FM
principles of computational					P/R/Tut	3		
linguistics					Written/oral examination	2		

#### Formal Foundations of Computational Linguistics: Logical Foundations $\rightarrow$ Relevant for subject grade: yes

Module and affiliated	Module type and	Recommended	Туре	Sem.	Breakdown of total CP		Total	Reference
courses	use	semesters		hrs.			СР	
Formal Foundations of	25%: CEM (alternative	25% (FL): 2nd		2			6	
Logical Foundations	chosen as special field)	30m.						
Logical foundations of			L	2	Contact	1	6	FF-L
computational linguistics					P/R/Tut	3		
					Written/oral examination	2		

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### Statistical Methods for Computational Linguistics $\rightarrow$ Relevant for subject grade: yes

Module and affiliated course	Module type and	Recommended	Туре	Sem.	Breakdown of total CP		Total	Reference
	use	semesters		hrs.			CP	
Statistical Methods for	100%: CM	100%: 3rd sem.		4			6	
Computational Linguistics	75%: CM	75%: 3rd sem.						
Prerequisites: FF-FM, ICL	50%: CM 25%: CEM (mandatory if AC chosen as special field)	50%: 3rd or 5th sem. 25% (AC): 5th sem.						
Statistical methods for computational linguistics			L+PC	4	Contact P/R/Tut Written/oral examination	2 2 2	6	FF-SM

# **Basic modules: Computer science**

### Introduction to Programming → Relevant for subject grade: 100%, 75%, 50%: no; 25% (AC): yes

Module and affiliated course	Module type and	Recommended	Туре	Sem.	Breakdown of total CP		Total	Reference
	use	semesters		hrs.			СР	
Introduction to Program-	100%: CM	100%: 1st sem.		4			6	
ming	75%: CM	75%: 1st sem.						
_	50%: CM	50%: 1st sem.						
	25%: CEM (mandatory if	25% (AC): 1st						
	AC chosen as special	sem.						
	field)							
Programming I			L+PC	4	Contact	2	6	PI
					P/R/Tut	2		
					Written/oral examination	2		

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### Advanced Programming for Computational Linguistics $\rightarrow$ Relevant for subject grade: yes

Module and affiliated course	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP		Total CP	Reference
Advanced Programming for Computational Linguistics Prerequisites: P I	100%: CM 75%: CM 50%: CM	100%: 2nd sem. 75%: 2nd sem. 50%: 2nd sem.		4			6	
Programming II			L+PC	4	Contact P/R/Tut Written/oral examination	2 2 2	6	PII

# **Basic modules: Linguistics**

### Foundations of Linguistic Analysis → Relevant for subject grade: yes

Module and affiliated courses	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP		Total CP	Reference
Foundations of Linguistic Analysis	100%: CM 75%: CM 50%: CM 25%: CM	100%: 1st sem. 75%: 1st sem. 50%: 1st sem. 25%: 3rd sem. 100%: 1st sem.		2			4	
Foundations of linguistics			L	2	Contact P/R/Tut Written/oral examination	1 2 1	4	FLA

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# Formal syntax $\rightarrow$ Relevant for subject grade: yes

Module and affiliated	Module type and use	Recommended	Туре	Sem.	Breakdown of total CP		Total	Reference
course		semesters		hrs.			СР	
Formal Syntax	100%: CM	100%: 2nd sem.		4			6	
	75%: CM	75%: 2nd sem.						
Prerequisites: FLA	50%: CM	50%: 2nd sem.						
-	25%: CEM (mandatory if FL	25% (FL): 2nd						
	chosen as special field)	sem.						
Formal Syntax			L+PC	4	Contact	2	6	FSyn
					P/R/Tut	2		-
					Written/oral examination	2		

#### Formal semantics $\rightarrow$ Relevant for subject grade: yes

Module and affiliated course	Module type and use	Recommended	Туре	Sem.	Breakdown of total		Total	Reference
		semesters		nrs.	СР		СР	
Formal Semantics	100%: CM	100%: 3rd sem.		4			6	
	75%: CM	75%: 3rd sem.						
Prerequisites: FLA, FFL-L	50%: CM	50%: 3rd sem.						
	25%: CEM (mandatory if FL	25% (FL): 5 <sup>th</sup>						
	chosen as special field)	sem.						
Formal Semantics			L+PC	4	Contact P/R/Tut Written/oral examination	2 2 2	6	FSem

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# Advanced modules: Computational linguistics

### Core Studies in Computational Linguistics $\rightarrow$ Relevant for subject grade: yes

Module and affiliated courses	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP		Total CP	Reference
Core Studies in	100%: CM	100%: 3rd-5th sem.		5 x 2			5 x 6 =	CS-CL
Computational Linguistics	75%: CM	75%: 3rd-5th sem.					30	
Prerequisites: FLA, FF-FM, ICL								
Computational linguistics								
Choice of lecture			L/PS	2 (L/PS,	Contact (L/PS, respectively)	1	6	CS-CL-6
courses/seminars on				respec-	P/R (L/PS, respectively)	2		
specialised aspects of				tively)	Written examination/	3		
theoretical and applied					Presentation/Written			
computational linguistics					assignment (L/PS,			
					respectively)			
Formal linguistics								
Choice of lecture			L/PS	2 (L/PS,	Contact (L/PS, respectively)	1	6	CS-FL-6
courses/seminars on				respec-	P/R (L/PS, respectively)	2		
specialised aspects of formal				tively)	Written examination/	3		
and applied linguistics					Presentation/Written			
					assignment (L/PS,			
					respectively)			

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#### Base studies in computational linguistics $\rightarrow$ Relevant for subject grade: yes

Module and affiliated courses	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP		Total CP	Reference
Base Studies in Computational Linguistics <sup>1</sup>	50%: CM	50%: 4th-5th sem.		2			6	BS-CL
Choice of lecture course/seminar on specialised aspects of theoretical and applied computational linguistics			L/PS	2	Contact P/R Written examination/ Presentation/ Written assignment	1 2 3	6	BS-CL-6
Formal linguistics								
Choice of lectures/seminars on specialised aspects of formal and applied linguistics			L/PS	2	Contact P/R Written examination/ Presentation/ Written assignment	1 2 3	6	BS-FL-6

<sup>1</sup> In the "Base Studies in Computational Linguistics" module, students may choose between a course in computational linguistics or formal linguistics.

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### Base Studies in Applied Computational Linguistics $\rightarrow$ Relevant for subject grade: yes

Module and affiliated courses	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP		Total CP	Reference
Base Studies in Applied Computational Linguistics Advanced studies: Applied	25%: CEM (mandatory if AC chosen as special field)	25% (AC): 4th- 6th sem.		2 x 2			1 x 3 + 1 x 4 = 7	BS-AC
Computational Linguistics Prerequisites: FLA, FF-FM								
Choice of 2 lectures/seminars on specialised aspects of theoretical and applied computational linguistics			L/PS	2	Contact P/R Written examination/ Presentation/ Written assignment	1 1 2	4	BS-AC-4
			L/PS	2	Contact P/R Written examination/ Presentation	1 1 1	3	BS-AC-3

### Base Studies in Formal Linguistics →Relevant for subject grade: yes

Module and affiliated courses	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP	Total CP	Reference
Base Studies in Formal Linguistics Advanced Studies in Formal Linguistics Prerequisites: FLA, FF-FM or FF-L, respectively	25%: CEM (mandatory if FL chosen as special field)	25% (FL): 4th-6 <sup>th</sup> sem.		2 x 2		1 x 3 + 1 x 4 = 7	BS-FL

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Choice of 2 lectures/seminars on specialised aspects of formal and applied computational linguistics		L/PS	2	Contact P/R Written examination/ Presentation/ Written assignment	1 1 2	4	BS-FL-4
		L/PS	2	Contact P/R Written examination/ presentation	1 1 1	3	BS-FL-3

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# Advanced modules: Computer science

Software Project  $\rightarrow$  Relevant for subject grade: yes

Module and affiliated	Module type	Recommended	Туре	Sem.	Breakdown of total CP		Total	Reference
courses	and use	semesters		hrs.			СР	
Software Project	100%: CM	100%: 4th-5th sem.		2			6	
<b>Prerequisites:</b> P II, FF-SM or ACL, respectively	75%: CM 50%: CM	75%: 4th-5th sem. 50%: 4th-5th sem.					Subject 4 IS	
Software project			HS+E	2	Contact Project implementation Documentation Presentation Group work	1 3 2 1 IS 3 IS	6 + 4	SP

#### Core Studies in Computer Science $\rightarrow$ Relevant for subject grade: yes

Module and affiliated	Module type	Recommended	Туре	Sem.	Breakdown of total CP	Total	Reference	
courses	and use	semesters		hrs.		СР		
Core Studies in Computer	100%: CEM	100%: 4th sem.		6		8		
Science	75%: CEM	75%: 4th sem.						
Advanced studies in computer science								
Students may choose a course from the compulsory modules of the Bachelor's degree programme in "Applied computer science" on one of the								
following topics: "Algorithms and data structures", "Software engineering" or "Databases". Detailed module descriptions can be found in the								
examination rules and regulations	examination rules and regulations of the "Applied computer science" programme.							

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### **Specialised modules**

### Advanced Studies (Computational Linguistics) $\rightarrow$ Relevant for subject grade: yes

Module and affiliated courses	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP		Total CP	Reference
Advanced Studies Computational Linguistics	100%: CEM 75%: CEM	100%: 5th sem. 75%: 5th sem.		2			8	
Specialised studies: Computational linguistics	50%: CEM	50%: 5th-6th sem.						
<b>Prerequisites:</b> Successful completion of CS-CL course (75% and 100%) or BS- CL (50%)								
Computational linguistics					•			
Choice of seminar on specialised aspects of theoretical and applied computational linguistics			MS	2	Contact P/R Written examination/ Presentation/ Written assignment	1 2 5	8	AS-CL

### Advanced Studies (Formal Linguistics) $\rightarrow$ Relevant for subject grade: yes

Module and affiliated courses	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP	Total CP	Reference
Advanced Studies Formal Linguistics	100%: CEM	100%: 5th sem.		2		8	
Specialised Studies Formal Linguistics	75%: CEM 50%: CEM	75%: 5th sem. 50%: 5th-6th sem.					
<b>Prerequisites:</b> Successful completion of CS-CL course (75% and 100%) or. BS-CL (50%)							

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Formal linguistics							
Choice of seminar on specialised aspects of formal and applied		MS	2	Contact P/R	1 2	8	AS-FL
linguistics				Written examination/ Presentation/Written assignment	5		

### Computational linguistics colloquium $\rightarrow$ Relevant for subject grade: yes

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Module and affiliated courses	Module type and use	Recommended semesters	Туре	Sem. hrs.	Breakdown of total CP		Total CP	Reference
Computational Linguistics Colloquium Computational Linguistics Colloquium	100%: CM 75%: CM 50%: CM	100%: 56. sem. 75%: 5th-6th sem. 50%: 5th-6th sem.		2			2	
<b>Prerequisites:</b> Successful completion of CS-CL course (75% and 100%) or BS-CL (50%)								
Computational linguistics colloquium			Coll	2	Contact P/R Presentation/ Written assignment	1 0.5 0.5	2	Coll

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# **Examination modules**

Examination module *B.A. thesis* 

 $\rightarrow$  Relevant for subject grade: no ; relevant for overall grade: yes

Module and affiliated	Module type and use	Recommended	Туре	Sem. hrs.	Total CP
courses		semesters			
BA thesis	100%: CM	100%: 6th sem.	Independent	max. of 3 months	12
	75%: CM	75%: 6th sem.	study		
	50% (1st major subject): CM	50%: 6th sem.			

Examination module *Oral final examination*  $\rightarrow$ 

Relevant for subject grade: yes

Module and affiliated	Module type and use	Recommended	Туре	Sem. hrs.	Total CP
courses		semesters			
Oral final examination	100%: CM	100%: 6th sem.	Independent	max. of 6 weeks	7
	75%: CM	75%: 6th sem.	study		

Published in the President's bulletin dated 29 July 2010, p. 907, amended on 18 May 2011 (President's bulletin dated 30 May 2011, p. 477), amended on 26 March 2015 (President's bulletin dated 17 May 2015).