Only those regulations published by the Georg-August-Universität Göttingen in its Official Bulletins are legally binding. Any claims to rights or titles resulting from the English translation of these regulations are expressly excluded.

Faculty of Mathematics and Computer Science:

Following the resolution of the Faculty Council of the Faculty of Mathematics and Computer Science dated 31.05.2023 the Presidential Board of the Georg-August-Universität Göttingen approved the fourteenth amendment of the examination and study regulations for the consecutive Master's degree programme "Applied Computer Science" on 26.06.2023 in the version published on 08.11.2011 (Official Announcements I no. 16/2011 S. 948) last amended by decision of the Presidential Board on 29.07.2022 (Official Announcements I no. 37/2022 p. 732); approved (§ 44 section 1 sentence 2 NHG in the version published on 26.02.2007 (Nds. GVBl. p. 69), last amended by Article 7 of the Act 23.03.2022 (Nds. GVBl. p. 218; § 37 section 1 sentence 3 no. 5 b) NHG; § 44 section 1 sentence 3 NHG).

Examination and study regulations for the consecutive Master's degree programme "Applied Computer Science" of the University of Göttingen

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Appendix II: Sample curricula

Appendix III: Module packages “Computer Science” worth a total of 36 C or 18 C

§ 1 Scope

(1) The "General examination regulations for Bachelor's and Master's degree programmes as well as other courses and degrees offered at the University of Göttingen" (APO) shall apply as amended to the consecutive Master's degree programme “Applied Computer Science” at the University of Göttingen.

(2) This regulation specifies the further provisions for the completion of the course of studies in the consecutive Master's degree programme “Applied Computer Science”.

§ 2 Objectives of the academic programme, purpose of the examination; academic degree

(1) The programme prepares students for independent scientific work as Computer Scientists in companies, administration and research institutions.

(2) [1]In the Master's degree programme, students learn to scientifically penetrate the subject and its applications and to further develop scientific methods and findings. [2]The degree programme also forms the basis for being accepted into a doctoral programme in the field of Computer Science.

(3) [1]The Master's programme is research-oriented. [2]Students are integrated into research projects; these must be in the field of Computer Science or Applied Computer Science.

(4) Examinations during the Master's programme determine whether the person to be examined has acquired the skills and methods of the subject as well as key competencies necessary for the study objectives.

(5) After passing the master's examination, the University of Göttingen awards the academic degree "Master of Science" (abbreviated "M. Sc.").

§ 3 Recommended prerequisites

[1]Sound knowledge of English and mathematics is recommended for a qualified Master's course of study. [2]Students whose knowledge of English or mathematics was not better than satisfactory in the course of their first studies are recommended to participate in continuous education courses accordingly before taking up the Master's programme.

§ 4 Mentoring model

[1]Students choose a mentor from among the authorised examiners within the chosen specialisation no later than the beginning of the second semester. [2]This mentor is the contact person for all matters concerning the studies (mentoring model). [3]As a rule, he or she shall later guide or supervise the master's thesis. [4]If a student is unable to find a mentor, a mentor shall be appointed by the Dean of Studies; students have the right to propose a mentor, which does not constitute a legal claim. [5]The mentor may be changed at the request of the student and only for good cause. [6]An important reason exists in particular if students change the field of application or if a disruption of the relationship of trust renders the continuation of the mentoring relationship unreasonable.

§ 5 Structure of the academic programme; duration of study; specialisations; study abroad

(1) The academic programme begins in the summer and winter semester.

(2) The standard period of study is four semesters.

(3) The academic programme is suitable for part-time study.

(4) [1]The course of study comprises 120 credits (ECTS credits, abbreviated: C), which are distributed as follows:

a) 24 C for the specialised studies,
b) to the professionalisation area 66 C, including key competencies amounting to at least 12 C,
c) 30 C for the master's thesis.

[2]An overview of the study structure is given in appendix I. [3]The module catalogue which also contains the module overview in the sense of § 4 section 1 sentence 1 APO, is published separately; it is an integral part of these Examination and Study Regulations. [4]A recommendation for the appropriate structure of the study programme can be found in the sample curricula attached in appendix II.

(5) [1]In the core curriculum, students acquire in-depth knowledge in system oriented computer science, which forms the scientific basis for acquiring the ability to apply and further develop the specialised methods of the subject in the professionalisation. [2]It is recommended to orient the core curriculum with regard to the intended specialisation.

(6) [1]The professionalisation area serves the students' profiling by focusing on a specialisation. [2]In this way, the professionalisation area offers students the opportunity to profile themselves according to individual and subject-specific inclinations and career aspirations and to acquire key competencies specific to their profession and across subjects.

(7) [1]The area of professionalisation is divided into specialisations for a total of at least 48 C, of which one must be chosen. [2]The choice of a specialisation also implies one of two study profiles:

a) System related profile:

- Specialisation „Application-oriented system development“,
- Specialisation „Application-oriented systems development with a specialisation in Bioinformatics“,
- Specialisation „Application-oriented systems development with a specialisation in Geoinformatics“,
- Specialisation „Application-oriented systems development with a specialisation in Ecological Informatics“,
- Specialisation „Application-oriented systems development with a specialisation in Medical Informatics“,
- Specialisation „Application-oriented systems development with a specialisation in Law and Computer Science“,

- Specialisation „Application-oriented systems development with a specialisation in Business Information Systems“,
- Specialisation „Application-oriented systems development with a specialisation in Scientific Computing“,
- Specialisation „Application-oriented systems development with a specialisation in Computational Neuroscience“,
- Specialisation „Application-oriented systems development with a specialisation in Digital Humanities“,

b) Application area related profile:

- Specialisation „Bioinformatics“,
- Specialisation „Geoinformatics“,
- Specialisation „Ecological Informatics“,
- Specialisation „Medical Informatics“,
- Specialisation „Law and Computer Science“,
- Specialisation „Business Information Systems“,
- Specialisation „Scientific Computing“,
- Specialisation „Computational Neuroscience“,
- Specialisation „Digital Humanities“,
- Specialisation „Data Science“.

[3]The module overview (appendix II) regulates the details. [3]The choice of a specialisation requires participation in a compulsory study counselling according to § 15 section 3.

(8) [1]If proof of certain subject-related knowledge and skills (admission requirements) is required for admission to a specialisation, the examination board may allow individual of these admission requirements to be made up for during the course of study. [2]In this case, the student shall be required to provide evidence of the prerequisites within a certain period of time. [3]Admission to the specialisation is excluded if the scope of the achievements according to sentence 1, which have not yet been completed, amounts to more than 15 credits.

(9) [1]If an examination-related achievement can be taken into account in the context of several module examinations, the examination registration must state for which module examination the examination-related achievement is being taken. [2]The same examination-related achievement cannot be taken into account in the context of another module examination.

(10) Modules and examination-related achievements that have been completed for the core curriculum cannot be taken into account in the professionalisation area, and vice versa.

(11) [1]As a rule, the second and third semesters are suitable for a study period abroad. However, due to individual study plans, other semesters may also be suitable; details must be discussed with the person responsible for the specialisation with the involvement of the mentor. [2]Achievements acquired abroad are recognised within the framework of the regulations of the General Examination

Regulations for Bachelor's and Master's degree programmes and other courses offered at the University of Göttingen. It is strongly recommended that a "learning agreement" is concluded before the start of the planned stay abroad.

§ 6 Examination board

(1) [1]The examination board consists of five voting members, namely the Dean of Studies as well as two members of the professors' group [Hochschullehrergruppe], one member of the academic staff group [Mitarbeitergruppe] and one member of the students group [Studierendengruppe], who are appointed by the respective group representatives in the Faculty Council of the Faculty of Mathematics and Computer Science. [2]At the same time, at least one deputy shall be appointed for each member.

(2) The examination board shall elect a chairperson and a deputy chairperson from the voting members of the professors' group [Hochschullehrergruppe].

§ 7 Representatives of specialisations

(1) [1]For each specialisation, the Dean of Studies shall appoint a representative from among the teaching staff involved in the specialization. [2]This appointee shall be responsible for ensuring the courses offered in his or her area of application, without prejudice to the responsibility of the Dean of Studies.

(2) Representatives for a specialisation shall be heard before a decision is made on the crediting of study periods, course- and examination-related achievements in their specialisation.

(3) [1]Specialsation representatives are responsible for assigning courses to modules in their specialisation. [2]This includes passing on this information to the Dean of Studies. [3]Representatives for a specialisation also coordinate the examination periods for their specialisation.

§ 8 Admission to courses with limited number of seats

(1) For admission to courses (e.g. modules, lectures and seminars) with a limited number of seats, in the event that there are more applications than seats available and no identical parallel courses can be offered, applications will be considered according to ranking groups in the following order:

a. Registration of students for whom the course is a compulsive or elective compulsive course;
b. Registration of students for whom the course is an elective course;
c. Registration of students in other programmes who are entitled to attend the course as part of the area of professionalisation;
d. Registration of students who wish to take the course as an additional course;
e. Other registrations of students.

(2) [1]Students who are about to complete their academic studies or who are in the respective semester for which the course is offered will be given precedence within the individual ranking groups

according to section 1; students, who for reasons not attributable to themselves, were unable to receive a seat in the previous semester will be given the same precedence. [2]In the event of ranking parity, precedence will be given to students for whom the enrollment to the course is a requirement for attendance in another course in their degree programme or the module package. [3]The date of registration and then a lottery will be decisive in cases of rank parity.

(3) [1]If not all students of the ranking groups according to section 1 letters a. to c. can be considered for the course in one semester, the Faculty of Mathematics and Computer Science shall determine a sufficiently higher number of seats for the next semester within the scope of the personnel and material possibilities. [2]This shall not apply in the event that the expected number of participants will most probably permit consideration of the students assigned to ranking groups as specified in section 1 letters a. to c.

§ 9 Subject-specific forms of examination

(1) In addition to the examinations permitted under the provisions of the APO, the following subject-specific examinations may be organised: Take-home examination.

(2) [1]In a take-home examination (THK), students work independently on a task at a location of their choice. [2]Students can choose the time or times at which they work on the assignment within a previously announced period (usually one week). [3]The amount of time required to complete the thesis is calculated according to the workload. [4]The THK is either made available for download at the beginning of the completion period and then submitted electronically or completed online during the completion period (e.g. via learning platforms such as ILIAS). [5]All aids used for the assignment must be indicated or cited; participants must declare in text form that they have completed the THK independently without the help of third parties or the use of unauthorised aids. [6]The assignment is not limited to text production, but may include other tasks such as the creation of programme code, software packages, containers or workpieces. [7]Further details can be found in the module description.

§ 10 Repeatability of examinations to improve grades

(1) [1]In the Master's degree programme "Applied Computer Science", module examinations with module numbers B.Inf.[number] and M.Inf.[number] passed in the standard period of study can each be repeated once for the purpose of improving the grade. The grade cannot be lowered as a result of the repetition.

(2) Module examinations may be repeated during the course of study, provided that the deadlines specified in § 14 section 2 are not exceeded as a result.

§ 11 Language of examination

The language of examination is German or English, depending on the language in which the courses of the module have been held.

§ 12 Admission to the master's thesis

(1) As a precondition for admission to the master's thesis, students must successfully complete modules totaling at least 48 C, including at least 24 C each from the core curriculum and the specialisation.

(2) [1]A written application for admission to the master's thesis must be submitted to the examination board responsible. [2]In this, following documents must be enclosed:

a) The proposal of topic for the master's thesis,
b) a proposal for the first academic advisor (usually the mentor) and the second academic advisor,
c) a written confirmation of the first academic advisor and the second academic advisor,
d) a declaration specifying that the master examination has not been failed definitively or registered as definitively failed in the same or a comparable master's degree programme at a domestic or foreign university,
e) Evidence of fulfilment of the prerequisites in accordance with section 1.

[3]The proposals under letters a), b) and c) are unnecessary if the student provides assurance that he or she has been unable to find an academic advisor. [4]In the event that the student is unable to find an academic advisor, the examination board will assign an academic advisor and a topic. [5]The candidate's view must be considered in choosing the topic.

(3) [1]The examination board decides on the admission. [2]This should be rejected if the qualifications for entry are not fulfilled or the master examination in the same or similar master's degree programme at a domestic or foreign university has been definitively failed or regarded as definitive failing.

§ 13 Master's thesis

(1) The topic of the master's thesis must be related to computer science or applied computer science as well as to the chosen specialisation.

(2) In the master's thesis, the candidate is expected to prove that he or she is capable of working on a problem from the chosen specialisation, of using scientific methods of the subject and within the specified time frame, of developing an independent scientifically based judgment, arriving at scientifically substantiated results and presenting the results in a formally as well as linguistically appropriate manner.

(3) - Rescinded -

(4) [1]The provisional topic of the master's thesis is to be agreed upon with the proposed first supervisor and submitted to the responsible examination board with a confirmation of the proposed

second supervisor. [2]If the candidate does not find a supervisor, the supervisor and a topic shall be determined by the responsible examination board. [3]The candidate shall be heard in the selection of the topic. [4]The right to propose a topic does not constitute a legal claim. [5]The topic of the master's thesis shall be issued by the Examination Office. [6]The time of issue must be recorded.

(5) [1]The time to complete the thesis is 6 months. [2]Upon application by the candidate, the examination board can extend the deadline for submitting the thesis by a maximum of four weeks in the event of an important reason that cannot be attributed to the candidate. [3]An important reason normally exists in the case of an illness that is to be given notice of immediately and demonstrated by producing a medical certificate.

(6) [1]The topic can be returned only once and only within the first 2 weeks of the time allotted for completing the thesis. [2]A new topic must be agreed on without delay, at the latest within 6 weeks. [3]In the event that the master's thesis is repeated, the topic may be returned only in accordance with sentence 1 if the examinee has not resorted to this option in the first submission of the master's thesis.

(7) [1]The master's thesis must be submitted to the responsible examination office in due time and exclusively in PDF/A format according to ISO 19005-1:2005; data supplementing the master's thesis (e.g. programme code, measured values) are to be submitted compressed as one file in ZIP format. [2]Students who credibly demonstrate that this is not reasonable for them will be supported by the university. [3]The time of submission should be recorded. [4]Upon submission, the candidate should declare that he or she has independently compiled the work and has not used any sources and tools other than those specified.

(6) [1]The Examination Office shall forward the master's thesis to the first supervisor and second supervisor as reviewers. [2]Each reviewer will award a grade. [3]The duration of the assessment procedure should not exceed 6 weeks.

§ 14 Overall result; peremptory failure

(1) The master examination is passed if at least 120 credits have been acquired and all of the required module examinations as well as the master's thesis have been passed.

(2) In addition to the cases specified in the APO, the right to take examinations is definitively extinguished if

a) at least 60 C have not been acquired from modules of this degree programme by the end of the second semester after the end of the standard period of study, or
b) not all credits required to pass the master's examination have been acquired by the end of the sixth semester after the end of the standard period of study;

In this case, the stipulations according to § 15 section 3 sentence 4 are binding.

[2]In the course of an academic year for which part-time study within the meaning of the regulations on part-time study in the currently valid version has been granted, a deadline in accordance with

sentence 1 is only exceeded if it would have been exceeded even after deduction of a reduction in the number of semesters of study that is expected due to the part-time study programme.
(3) [1]Exceeding the deadlines specified in section 2 is permissible if the student is not responsible for exceeding the deadline. [2]The examination board shall decide on this upon application by the student.
(4) Graded modules in the elective area of interdisciplinary key competencies will not be included in the calculation of the grade point average of the master examination.
(5) The grade point average "with distinction" will be awarded if the master's thesis is graded 1.0 and the grade point average of the master examination is at least 1.2.

§ 15 Study advisory service; compulsory study advisory

(1) [1]General advising for students is provided by the Central Office of Student Affairs of the University of Göttingen. [2]It covers questions regarding the eligibility and admissions for a course, study opportunities as well as the structure of studies.
(2) The student advisor of the Department of Computer Science is responsible for general subject guidance. [2]He supports the students in particular in questions of study design, study techniques and the choice of a specialisation as well as in overcoming study difficulties.
(3) [1]The selection of a specialisation requires the participation in a compulsory study advisory session with the corresponding specialisation representative with the participation of the mentor. [2]The compulsory study advisory serves to agree on an individual curriculum based on the choices regulated in the module overview. [3]The individualised curriculum should ensure that the course of studies can be completed within the standard period of study and that a coherent competence profile is acquired with regard to the objectives of the course of study. [4]The individual curriculum is binding for the course of studies and requires the approval of the Dean of Studies for Computer Science. [5]Sentences 1 to 4 shall apply accordingly to the amendment of an individual curriculum.

§ 16 Entry into force; interim regulations

(1) This regulation enters into force following publication in the Official Announcements of the Georg-August-Universität Göttingen as per 01/10/2011.
(2) [1]Students who commenced their studies before an amendment to these examination and study regulations came into force and who were continuously enrolled in the Master's degree programme "Applied Computer Science" at the University of Göttingen without interruption will be examined on the basis of the examination regulations in the version published on 22/09/2006 (Official Announcements no. 20/2006 p. 1702) as well as the supplementary study regulations for the Master's degree programme "Applied Computer Science" at the University of Göttingen in the version of the announcement of 22/09/2006 (Official Announcements no. 21/2006 p. 1800). [2]In the case of examinations still to be taken, this shall not apply to the module overview, module catalogue and module handbook, unless the protection of a student's confidence requires a deviating decision

by the examination board. [3]A deviating decision is possible in particular in cases in which a module examination can be repeated or a compulsory or required elective compulsory module has been substantially changed or cancelled. [4]The examination board may make general regulations in this regard. [5]Students in accordance with sentence 1 shall, upon application, be examined as a whole in accordance with the provisions of these regulations.

(3) An examination according to the examination regulations for the Master's degree programme “Applied Computer Science” at the University of Göttingen in the version published on 22/09/2006 (Official Announcements no. 20/2006 p. 1702) as well as the supplementary study regulations for the Master's degree programme “Applied Computer Science” at the University of Göttingen in the version published on 22/06/2006 (Official Announcements no. 21/2006 p. 1800) will be held for the last time in the winter semester 2014/15.

(4) Notwithstanding the provisions of sections 2 and 3, the examination regulations for the Master's degree programme “Applied Computer Science” at the University of Göttingen in the version published on 22/09/2006 (Official Announcements no. 20/2006 p. 1702) as well as the study regulations for the Master's degree programme “Applied Computer Science” at the University of Göttingen in the version published on 22/09/2006 (Official Announcements no. 21/2006 p. 1800) shall cease to be in force when these examination and study Regulations come into force.

(5) [1]Students who commenced their studies before an amendment to these examination and study regulations came into force and who were continuously enrolled in the Master's degree programme "Applied Computer Science" shall, upon application, be examined according to the examination and study regulations in the version valid before the amendment came into force; the application shall be submitted within one semester after the amendment came into force. [2]If, upon application pursuant to sentence 1, the examination and study regulations in the version applicable before the amendment came into force are to be applied, this shall not apply to the module overview and descriptions in the case of examinations still to be taken, unless the protection of a student's legitimate expectations requires a different decision by the examination board. [3]A deviating decision is possible in particular in cases in which a module examination can be repeated or a compulsory or required elective compulsory module has been substantially changed or cancelled. [4]The examination board may make general regulations in this regard. [5]Students in accordance with sentence 1 shall, upon application, be examined as a whole in accordance with the provisions of these regulations.

Appendix I: Overview of the structure of the degree programme

Core curriculum	24 C	System-orientated computer science (24 C)
Professionalisation	66 C	Specialisation (at least 48 C) • Application-oriented system development, possibly with a specialization in one of the applied computer sciences • Bioinformatics • Geoinformatics • Computer Science of Ecosystems (Ecological Informatics) • Medical Informatics • Law and Computer Science • Buisiness Information Systems • Scientific Computing • Neuroinformatics (Computational Neuroscience) • Digital Humanities • Data Science Key competencies (at least 12 C) Elective modules (up to 6 C)
Master's thesis	30 C	
Master (4 Semesters)	120 C	

Appendix II: Sample curricula

a. Specialisation “Bioinformatics“

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)			Specialisation (48 C) Master’s thesis (30 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 33 C	M.Inf.1120 Mobile communication 5 C	M.Inf.1152 Specalisation in software engeneering: Quality assurance 5 C	M.Inf.1171 Cloud and Service Computing 5 C		M.Bio.310 Systems biology 12 C	B.Bio-NF.129 Genetics and Microbial Cell Biology 6 C		
2. WiSe Σ 28 C	M.Inf.1121 Specalisation in Mobile communication 5 C	M.Inf.1138 Usable Security and Privacy 5 C		M.iPAB.0003 Statistical genetics, breeding informatics and experimental design 6 C	B.Bio-NF.112 Biochemestry 6 C	M.Inf.1505 Models and Algorithms in Bioinformatics 6 C		
3. SuSe Σ 29 C	M.Inf.1251 Seminar: Software Evolution 5 C			M.Inf.1202 Bioinformatics in a research-related project work 12 C			M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. WiSe Σ 30 C				Master’s thesis 30 C				

b. Specialisation “Medical Informatics“

<table>
<tr><th rowspan="2">Sem.
Σ C</th><th colspan="2">Core curriculum (24 C) and Elective modules (6 C)</th><th colspan="5">Specialisation (48 C)
Master’s thesis (30 C)</th><th colspan="2">Key competencies (12 C)</th></tr>
<tr><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td></tr>
<tr><td>1.
WiSe
Σ 30 C</td><td>M.Inf.1152
Specalisation in software engineering: Quality assurance
5 C</td><td>M.Inf.1138
Usable Security and Privacy
5 C</td><td rowspan="2">M.Inf.1306
Market Analysis
9 C</td><td>M.Inf.1351
Working methods in health research
5 C</td><td>M.Inf.1308
Journal Club
3 C</td><td>M.Inf.1355.1
IT-Management techniques in the healthcare sector
4 C</td><td rowspan="2">M.Inf.1356
Infrastructures of clinical research
9 C</td><td></td><td></td></tr>
<tr><td>2.
SuSe
Σ 29 C</td><td>M.Inf.1250
Seminar: Software quality assurance
5 C</td><td>M.Inf.1171
Cloud and Service Computing
5 C</td><td>M.Inf.1205
Medical informatics in a small research-related project work
6 C</td><td></td><td>M.Inf.1355.2
IT-Management techniques in the healthcare sector
3 C</td><td></td><td></td><td></td></tr>
<tr><td>3.
WiSe
Σ 31 C</td><td>M.Inf.1121
Specalisation in Mobile communication
5 C</td><td>M.Inf.1153
Specalisation in software engineering: Requirements Engineering
5 C</td><td></td><td>M.Inf.1307
Current Topics in Medical Informatics
6 C</td><td></td><td>M.Inf.1355.3
IT-Management techniques in the healthcare sector
3 C</td><td></td><td>M.Inf.1809
Profession-specific KC in research-related project work
6 C</td><td>M.Inf.1810
Expansion of profession-specific key skills in research-related project work
6 C</td></tr>
<tr><td>4.
SuSe
Σ 30 C</td><td colspan="2"></td><td colspan="5">Master’s thesis
30 C</td><td></td><td></td></tr>
</table>

c. Specialisation "Computer Science of Ecosystems (Ecological Informatics)"

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)			Specialisation (48 C) Master's thesis (30 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 30 C	B.Inf.1236 Machine Learning 6 C	M.Inf.1141 Semi-structured Data and XML 6 C	M.Inf.1161 Image analysis and understanding 6 C	M.FES.121 Advanced Data Analysis with R 6 C	M.FES.123 Functional-Structural Plant Models 6 C			
2. WiSe Σ 27 C	M.Inf.1232 Parallel Computing 6 C			M.FES.111 Introduction to Ecological Modelling 6 C	B.Forst.1110 Silviculture 9 C	M.FES.114 Ecosystem-Atmosphere Processes 6 C		
3. SuSe Σ 33 C	M.Inf.1808 Practical Course on Parallel Computing 6 C			M.Inf.1204 Computer science of ecosystems in a research-related project work 12 C	M.Forst.1115 Silviculture - Exercises 3 C		M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. WiSe Σ 30 C				Master's thesis 30 C				

d. Specialisation “Law and Computer Science “

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)		Specialisation (48 C) Master’s thesis (30 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 33 C	M.Inf.1120 Mobile communication 5 C	M.Inf.1122 Seminar specialising in telematics 5 C	S.RW.1137 Intellectual property law II (industrial property rights) 6 C	S.RW.0113K Basic course II in civil law 9 C	S.RW.0313 Constitutional Law II 8 C		
2. WiSe Σ 27 C	M.Inf.1121 Specalisation in Mobile communication 5 C	M.Inf.1102 Extended Practical Course on Modelling 9 C	S.RW.1139 Intellectual property law I (copyright) 6 C	S.RW.0211K Constitutional Law I 7 C			
3. SuSe Σ 30 C		M.Inf.1231 Specalisation Distributed Systems 6 C	S.RW.2410 Seminar E-Commerce-Law and regulation 12 C			M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. WiSe Σ 30 C			Master’s thesis 30 C				

e. Specialisation “Business Information Systems“

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)			Specialisation (48 C) Master’s thesis (30 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 28 C	M.Inf.1120 Mobile communication 5 C	M.Inf.1122 Seminar specialising in telematics 5 C		M.WIWI-WIN.0003 Information management 6 C	M.WIWI-WIN.0002 Integrated user systems 6 C	M.WIWI-BWL.0001 Finanzwirtschaft 6 C		
2. WiSe Σ 32 C	M.Inf.1121 Specalisation in Mobile communication 5 C	M.Inf.1232 Parallel Computing 6 C	M.Inf.1102 Extended Practical Course on Modelling 9 C				M.Inf.1800 Practical Course Advanced Networking 6 C	M.Inf.1803 Practical Course in Data Fusion 6 C
3. SuSe Σ 30 C				M.WIWI-WIN.0005 Seminar on business informatics 12 C	M.WIWI-BWL.0059 Project studies 18 C			
4. WiSe Σ 30 C				Master’s thesis 30 C				

f. Specialisation “Scientific Computing“

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)		Specialisation (48 C) Master’s thesis (30 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. WiSe Σ 31 C	M.Inf.1113 Specalisation in Theoretical Computer Science 5 C	M.Inf.1111 Seminar Theoretical Computer Science 5 C	B.Mat.3122 Introduction to algebraic number theory 9 C	B.Phy.1551 Introduction to Astrophysics 8 C	B.Phy.1531 Introduction to Materials Physics 4 C		
2. SuSe Σ 30 C	B.Inf.1236 Machine Learning 6 C	M.Inf.1102 Extended Practical Course on Modelling 9 C	B.Mat.3031 Scientific computing 6 C	B.Mat.2300 Numerical analysis 9 C			
3. WiSe Σ 29 C	M.Inf.1138 Usable Security and Privacy 5 C		M.Inf.1208 Scientific computing in research-related project work 12 C			M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. SuSe Σ 30 C			Master’s thesis 30 C				

g. Specialisation "Neuroinformatics (Computational Neuroscience)"

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)		Specialisation (48 C) Master's thesis (30 C)				Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. WiSe Σ 28 C	M.Inf.1113 Specalisation in Theoretical Computer Science 5 C	M.Inf.1111 Seminar Theoretical Computer Science 5 C	B.Phy.5651 Advanced Computational Neuroscience 3 C		B.Phy.5601 Theoretical and Computational Neuroscience I 3 C	B.Phy.1571 Introduction to Biophysics 6 C	M.Inf.1824 Practical Course on Computer Security and Privacy 6 C	
2. SuSe Σ 32 C	B.Inf.1236 Machine Learning 6 C	M.Inf.1102 Extended Practical Course on Modelling 9 C	M.Phy.5601 Seminar Computational Neuroscience/ Neuroinformatics 4 C	M.Inf.1188 Mobile Robotics 5 C	B.Phy.5602 Theoretical and Computational Neuroscience II 3 C	M.Inf.2541 Current Topics in Computational Neuroscience 5 C		
3. WiSe Σ 30 C	M.Inf.1138 Usable Security and Privacy 5 C		M.Inf.1209 Neuroinformatics in research-related project work 10 C			B.Phy.5676 Computer Vision and Robotics 9 C	M.Inf.1809 Profession-specific KC in research-related project work 6 C	
4. SuSe Σ 30 C			Master's thesis 30 C					

h. Specialisation "Application-oriented systems development with a specialisation in Bioinformatics"

Sem. Σ C	Core curriculum (24 C) Master's thesis (30 C)			Specialisation (48 C) and Elective modules (6 C)				Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. WiSe Σ 32 C	M.Inf.1113 Specalisation in Theoretical Computer Science 5 C			M.Bio.310 Systems biology 12 C	M.Inf.1232 Parallel Computing 6 C	SK.Bio.305 Basics of biostatistics with R 3 C	B.Bio-NF.116 General developmental and cell biology 6 C		
2. SuSe Σ 29 C		M.Inf.1111 Seminar Theoretical Computer Science 5 C	M.Inf.1102 Extended Practical Course on Modelling 9 C	M.Inf.1501 Data mining in bioinformatics 6 C	M.iPAB.0014 Data Analysis with R 3 C	B.Bio-NF.118 Microbiology 6 C			
3. WiSe Σ 29 C	M.Inf.1138 Usable Security and Privacy 5 C			M.Inf.1201 System development in a research-related project work 12 C				M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. SuSe Σ 30 C	Master's thesis 30 C								

i. Specialisation "Application-oriented systems development with a specialisation in Geoinformatics"

Sem. Σ C	Core curriculum (24 C)) and Elective modules (6 C) Master's thesis (30 C)				Specialisation (48 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. WiSe Σ 31 C	M.Inf.1152 Specalisation in software engineering: Quality assurance 5 C	M.Inf.1114 Algorithms on Sequences 5 C	M.Inf.1138 Usable Security and Privacy 5 C	M.Inf.1155 Seminar: Selected aspects of software engineering 5 C	M.Geg.12 Project work: GIS-based resource assessment and -utilisation planning 6 C	M.Geg.06 Landscape ecology and landscape development 5 C			
2. SuSe Σ 27 C	M.Inf.1250 Seminar: Software quality assurance 5 C	M.Inf.1185 Sensor Data Fusion 5 C			M.Geg.05 Geoinformation systems and environmental monitoring 5 C	M.Geg.02 Ressource utilisation problems 6 C	M.Inf.1804 Practical Course in Software Quality Assurance 6 C		
3. WiSe Σ 32 C					M.Inf.1201 System development in a research-related project work 12 C		M.Geg.903 Geo-informatics project Practical Course 8 C	M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. SuSe Σ 30 C	Master's thesis 30 C								

j. Specialisation "Application-oriented systems development with a specialisation in Medical Informatics"

<table>
<tr><th rowspan="2">Sem.
Σ C</th><th colspan="4">Core curriculum (24 C)) and Elective modules (6 C)
Master's thesis (30 C)</th><th colspan="4">Specialisation (48 C)</th><th colspan="2">Key competencies
(12 C)</th></tr>
<tr><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td><td>Modul</td></tr>
<tr><td>1.
WiSe
Σ 30 C</td><td>M.Inf.1152
Specalisation in software engineering: Quality assurance
5 C</td><td>M.Inf.1138
Usable Security and Privacy
5 C</td><td></td><td></td><td rowspan="2">M.Inf.1306
Market Analysis
9 C</td><td rowspan="2">M.Inf.1356
Infrastructures for clinical research
9 C</td><td>M.Inf.1303
Imaging and visualisation
6 C</td><td>M.Inf.1231
Specialisation Distributed Systems
6 C</td><td></td><td></td></tr>
<tr><td>2.
SuSe
Σ 30 C</td><td>M.Inf.1250
Seminar: Software quality assurance
5 C</td><td>M.Inf.1188
Mobile Robotics
5 C</td><td>M.Inf.1120
Mobile communication
5 C</td><td>M.Inf.1122
Seminar specialising in telematics
5 C</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>3.
WiSe
Σ 30 C</td><td></td><td></td><td></td><td></td><td>M.Inf.1304
E-Health
6 C</td><td></td><td>M.Inf.1201
System development in a research-related project work
12 C</td><td></td><td>M.Inf.1809
Profession-specific KC in research-related project work
6 C</td><td>M.Inf.1810
Expansion of profession-specific key skills in research-related project work
6 C</td></tr>
<tr><td>4.
SuSe
Σ 30 C</td><td colspan="4">Master's thesis
30 C</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

k. Specialisation “Application-oriented systems development with a specialisation in Ecological Informatics“

Sem. Σ C	Core curriculum (24 C)) and Elective modules (6 C) Master’s thesis (30 C)			Specialisation (48 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 30 C	M.Inf.1142 Semantic Web 6 C	B.Inf.1236 Machine Learning 6 C		M.FES.122 Ecological Simulation Modeling 6 C	M.FES.123 Functional-Structural Plant Models 6 C	M.FES.121 Advanced Data Analysis with R 6 C		
2. WiSe Σ 27 C	M.Inf.1243: Deductive Databases 6 C	B.Inf.1237 Deep Learning for Computer Vision 6 C		B.Forst.1110 Silviculture 9 C	M.Inf.1802 Practical Course on XML 6 C			
3. SuSe Σ 33 C	M.Inf.1141 Semi-structured data and XML 6 C			M.Inf.1201 System development in a research-related project work 12 C	B.Forst.1115 Silviculture - Exercises 3 C		M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. WiSe Σ 30 C	Master’s thesis 30 C							

I. Specialisation “Application-oriented systems development with a specialisation in Law and Computer Science“

Sem. Σ C	Core curriculum (24 C)) and Elective modules (6 C) Master’s thesis (30 C)			Specialisation (48 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 30 C	M.Inf.1120 Mobile communication 5 C	M.Inf.1122 Seminar specialising in telematics 5 C		S.RW.1140 Youth media protection law 6 C	S.RW.1432 Sociology of law 4 C	B.WIWI-OPH.0009 Law 8 C		
2. WiSe Σ 31 C	M.Inf.1124 Specalisation in computer networks 5 C	M.Inf.1138 Usable Security and Privacy 5 C	M.Inf.1192 Privacy in Ubiquitous Computing 5 C	S.RW.1233 Tele-communications law 6 C	S.RW.1317 Criminology I 6 C	M.Inf.1824 Practical Course on Computer Security and Privacy 6 C		
3. SuSe Σ 29 C	M.Inf.1291 Seminar Advanced Topics in Computer Security and Privacy 5 C			M.Inf.1201 System development in a research-related project work 12 C			M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. WiSe Σ 30 C	Master’s thesis 30 C							

m. Specialisation “Application-oriented systems development with a specialisation in Business Information Systems“

Sem. Σ C	Core curriculum (24 C)) and Elective modules (6 C) Master’s thesis (30 C)				Specialisation (48 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 28 C	M.Inf.1120 Mobile communicatio n 5 C	M.Inf.1122 Seminar specialising in telematics 5 C			M.WIWI-WIN.0005 Seminar on business informatics 12 C		M.WIWI-BWL.0034 Logistics- and supply chain management 6 C		
2. WiSe Σ 32 C	M.Inf.1192 Seminar on Privacy in Ubiquitous Computung 5 C	M.Inf.1138 Usable Security and Privacy 5 C	M.Inf.1124 Specalisation in computer networks 5 C	M.Inf.1229 Seminar specialising in telematics 5 C	M.WIWI-WIN.0001 Modeling and System Development 6 C	M.WIWI-BWL.0023 Management Accounting 6 C			
3. SuSe Σ 30 C					M.Inf.1201 System development in a research-related project work 12 C	M.Inf.1226 Security and co-operation in wireless networks 6 C		M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. WiSe Σ 30 C	Master’s thesis 30 C								

n. Specialisation "Application-oriented systems development with a specialisation in Scientific Computing"

Sem. Σ C	Core curriculum (24 C)) and Elective modules (6 C) Master's thesis (30 C)		Specialisation (48 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. WiSe Σ 31 C	M.Inf.1113 Specalisation in Theoretical Computer Science 5 C	M.Inf.1111 Seminar Theoretical Computer Science 5 C	B.Mat.3122 Introduction to algebraic number theory 9 C	B.Phy.1571 Introduction to Biophysics 6 C	B.Inf.1241 Computational Optimal Transport 6 C		
2. SuSe Σ 30 C	B.Inf.1236 Machine Learning 6 C	M.Inf.1102 Extended Practical Course on Modelling 9 C	B.Mat.3031 Scientific Computing 6 C	B.Mat.2300 Numerical analysis 9 C			
3. WiSe Σ 29 C	M.Inf.1114 Algorithms on Sequences 5 C		M.Inf.1201 System development in a research-related project work 12 C			M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. SuSe Σ 30 C	Master's thesis 30 C						

o. Specialisation "Application-oriented systems development with a specialisation in Computational Neuroscience"

Sem. Σ C	Core curriculum (24 C)) and Elective modules (6 C) Master's thesis (30 C)			Specialisation (48 C)				Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. **WiSe** **Σ 30 C**	M.Inf.1217 Cryptography 6 C	M.Inf.1232 Parallel Computing 6 C	M.Inf.1236 High-Performance Data Analytics 6 C	B.Phy.5651 Advanced Computational Neuroscience I 3 C	B.Phy.5601 Theoretical and Computational Neuroscience I 3 C	B.Phy.1561 Introduction to Physics of Complex Systems 6 C			
2. **SuSe** **Σ 32 C**	M.Inf.1142 Semantic Web 6 C	M.Inf.1141 Semi-structured data and XML 6 C		M.Inf.1829 Practical Course High-Performance Computing 6 C	B.Phy.5602 Theoretical and Computational Neuroscience II 3 C	B.Inf.1236 Machine Learning 6 C	M.Inf.1185 Sensor Data Fusion 5 C		
3. **WiSe** **Σ 28 C**				M.Inf.1201 System development in a research-related project work 12 C	M.Phy.5601 Seminar Computational Neuroscience/ Neuroinformatics 4 C			M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. **SuSe** **Σ 30 C**	Master's thesis 30 C								

p. Specialisation “Application-oriented systems development“ with module package Foundations of Business Information Systems

Sem. Σ C	Core curriculum (30 C) and Elective modules (6 C) Master’s thesis (30 C)				Specialisation (48 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 28 C	M.Inf.1120 Mobile communicatio n 5 C	M.Inf.1122 Seminar specialising in telematics 5 C			M.WIWI-WIN.0008 Change & Run IT 6 C	M.WIWI-WIN.0009 Internet Economics 6 C	M.WIWI-BWL.0018 Analysis of IFRS Financial Statements 6 C		
2. WiSe Σ 32 C	M.Inf.1155 Seminar: Selected aspects of software engeneering 5 C	M.Inf.1138 Usable Security and Privacy 5 C	M.Inf.1229 Seminar Specalisation Telematics 5 C	M.Inf.1291 Seminar Advanced Topics in Computer Security 5 C	M.WIWI-BWL.0109 International Human Resource Management 6 C	M.WIWI-WIN.0011 Entrepreneurship 1 – Theoretical foundations 6 C			
3. SuSe Σ 30 C					M.Inf.1201 System development in a research-related project work 12 C	B.Inf.1236 Machine Learning 6 C		M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. WiSe Σ 30 C	Master’s thesis 30 C								

q. Specialisation “Digital Humanities“

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)		Specialisation (48 C) Master’s thesis (30 C)			Key competencies (12 C)
	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 27 C	B.Inf.1236 Machine Learning 6 C	M.Inf.1141 Semi-structured data and XML 6 C	SK.DH.21 E-Learning 3 C	M.Inf.1906 Computational Semantics and Discourse Processing 6 C		Interdisciplinary key competencies 6 C
2. WiSe Σ 30 C	M.Inf.1236 High-Performance Data Analytics 6 C	B.Inf.1237 Deep Learning for Computer Vision 6 C	M.DH.16 Digital analysis of historical contexts 9 C	B.Inf.1903 Spokesperson and text analysis in practice 6 C	M.Inf.1905 Advanced Topics in Language and Text Processing 3 C	
3. SuSe Σ 33 C	M.Inf.1829 Practical Course High-Performance Computing 6 C		M.DH.20a Research project on digital language analysis 12 C	B.DH.33 Information retrieval and corpus building for text and language analysis (9 C)		M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. WiSe Σ 30 C			Master’s thesis 30 C			

r. Specialisation “Application-oriented systems development with a specialisation in “Digital Humanities“

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C) Master’s thesis (30 C)			Specialisation (48 C)			Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 33 C	B.Inf.1236 Machine Learning 6 C	M.Inf.1141 Semi-structured Data and XML 6 C	M.Inf.2202 Deep Learning for Natural Language Processing 6 C	B.DH.02 Introduction to digital image and object science 6 C	SK.DH.21 E-Learning 3 C	M.Inf.1822 Practical Course in Data Fusion 6 C		
2. WiSe Σ 27 C	M.Inf.1243: Deductive Databases 6 C	M.Inf.1232 Parallel Computing 6 C		M.Inf.1905 Advanced Topics in Language and Text Processing 3 C	B.Inf.1904 Introduction to Computational Linguistics and Natural Language Processing 6 C	B.Inf.1903 Spokesperson and text analysis in practice 6 C		
3. SuSe Σ 30 C				M.Inf.1201 System development in a research-related project work 12 C	M.Inf.1906 Computational Semantics and Discourse Processing 6 C		M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. WiSe Σ 30 C	Master’s thesis 30 C							

s. Specialisation “Data Science“ with module package „Bioinformatics“

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)				Specialisation (48 C) Master’s thesis (30 C)			Key competencies (12 C)
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 29 C	B.Inf.1244 Data Management for Data Science 5 C				B.Inf.1236 Machine Learning 6 C	B.Inf.1231 Infrastructures for data science 6 C	M.Bio.310 Systembiologie 12 C	
2. WiSe Σ 32 C	M.Inf.1114 Algorithms on Sequences 5 C	M.Inf.1138 Usable Security and Privacy 5 C	M.Inf.1152 Specalisation in software engineering: Quality assurance 5 C	M.Inf.1291 Seminar Advanced Topics in Computer Security and Privacy 5 C	B.Inf.1237 Deep Learning for Computer Vision 6 C			Interdisciplinary key competencies 6 C
3. SuSe Σ 29 C		M.Inf.1188 Mobile Robotics 5 C			M.Inf.1258 Data Science in a small research-related project work 12 C	M.Inf.1501 Data mining in bioinformatics 6 C		M.Inf.1809 Profession-specific KC in research-related project work 6 C
4. WiSe Σ 30 C					Master’s thesis 30 C			

t. Specialisation “Data Science“ with module package „Computational Neuroscience“

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)		Specialisation (48 C) Master’s thesis (30 C)				Key competencies (12 C)	
	Modul	Modul	Modul	Modul	Modul	Modul	Modul	Modul
1. WiSe Σ 32 C	M.Inf.1232 Parallel Computing 6 C	M.Inf.1236 High-Performance Data Analytics 6 C	B.Phy.5676 Computer Vision and Robotics 9 C	M.Inf.1114 Algorithms on Sequences 5 C	B.Phy.5601 Theoretical and Computational Neuroscience I 3 C	B.Phy.5651 Advanced Computational Neuroscience 3 C		
2. SuSe Σ 29 C	M.Inf.1829 Practical Cource High-Performance Computing 6 C	B.Inf.1236 Machine Learning 6 C	B.Inf.1231 Infrastructures for data science 6 C	B.Inf.1244 Data Management for Data Science 5 C	B.Phy.5602 Theoretical and Computational Neuroscience II 3 C	SK.Bio-NF.7001 Neurobiology 3 C		
3. WiSe Σ 29 C	B.Inf.1237 Deep Learning for Computer Vision 6 C		M.Inf.1258 Data Science in a small research-related project work 6 C	M.Inf.2241 Current Topics in Machine Learning 5 C			M.Inf.1809 Profession-specific KC in research-related project work 6 C	M.Inf.1810 Expansion of profession-specific key skills in research-related project work 6 C
4. SuSe Σ 30 C			Master’s thesis 30 C					

u) Specialisation "Bioinformatics", part-time study, beginning in the winter semester

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)		Specialisation (48 C) Master's thesis (30 C)		Key competencies (12 C)
	Modul	Modul	Modul	Modul	Modul
1. WiSe Σ 17 C	M.Inf.1152 Specalisation in software engineering: Quality assurance 5 C		M.Inf.1505 Models and Algorithms in Bioinformatics 6 C	B.Bio-NF.112 Biochemestry 6 C	
2. SuSe Σ 13 C	M.Inf.1250 Seminar: Software Quality Assurance 5 C	B.Inf.1244 Data Management for Data Science 5 C		M.iPAB.0014 Data Analysis with R 3 C	
3. WiSe Σ 12 C			M.iPAB.0003 Statistical genetics, breeding informatics and experimental design 6 C		M.Inf.1822 Practical Course in Data Fusion 6 C
4. SuSe Σ 18 C			M.Inf.1501 Data mining in bioinformatics 6 C	B.Bio-NF.118 Microbiology 6 C	M.Inf.1804 Practical Course in Software Quality Assurance 6 C
5. WiSe Σ 13 C	M.Inf.1114 Algorithms on Sequences 5 C	M.Inf.1138 Usable Security and Privacy 5 C	M.Bio.142 Molecular genetics and microbial cell biology 3 C		
6. SuSe Σ 17 C	M.Inf.1188 Mobile Robotics 5 C		M.Inf.1202 Bioinformatics in a research-related project work 12 C		
7. WiSe Σ 30 C			Master's thesis 30 C		

v) Specialisation "Data Science" with module package "Computational Neuroscience", part-time study, start of studies in the summer semester

Sem. Σ C	Core curriculum (24 C) and Elective modules (6 C)		Specialisation (48 C) Master's thesis (30 C)		Key competencies (12 C)
	Modul	Modul	Modul	Modul	Modul
1. SuSe Σ 15 C	M.Inf.1236 Machine Learning 6 C		B.Inf.1231 Infrastructures for data science 6 C	SK.Bio-NF.7001 Neurobiology 3 C	
2. WiSe Σ 15 C	M.Inf.1232 Parallel Computing 6 C	M.Inf.1236 High-Performance Data Analytics 6 C		B.Phy.5601 Theoretical and Computational Neuroscience I 3C	
3. SuSe Σ 16 C			B.Inf.1244 Data Management for Data Science 5 C	M.Inf.1188 Mobile Robotics 5 C	M.Inf.1822 Practical Course in Data Fusion 6 C
4. WiSe Σ 14 C	B.Inf.1237 Deep Learning for Computer Vision 6 C		M.Inf.1114 Algorithms on Sequences 5 C	B.Phy.5651 Advanced Computational Neuroscience 3 C	
5. SuSe Σ 15 C	M.Inf.1829 Practical Course High-Performance Computing 6 C		B.Phy.5602 Theoretical and Computational Neuroscience II 3 C		Interdisciplinary key competencies 6 C
6. WiSe Σ 15 C			M.Inf.1258 Data Science in a small research-related project work 6 C	B.Phy.5676 Computer Vision and Robotics 9 C	
7. SuSe Σ 30 C			Master's thesis 30 C		

Appemdix III: Module packages „Computer Science“ worth a total of 36 C or 18 C
(can only be taken as part of another suitable Master’s degree programme)

The Department of Computer Science offers the following module packages for students of other degree programmes.

I. Admission requirements

The following common admission requirements apply to the module packages "Computer Science" worth a total of 36 C and 18 C respectively:

Proof of achievements from foundations of computer science totalling at least 30 C. Proof of achievements in the foundations of mathematics totalling at least 18 C. Proof of programming knowledge totalling at least 5 C. Proof of further achievements in computer science totalling at least 10 C.

II. Module package „Computer Science“ worth a total of 36 C

1. Study objectives

The basic aim is to develop the ability to work independently in the field of system-oriented computer science. Furthermore, the knowledge in one of the fields of theoretical computer science, software technology, databases or computer networks should be deepened, as well as competences in dealing with current scientific literature in this field should be acquired.

2. Module overview

Modules totalling at least 36 C must be successfully completed from the following range.

a. The following modules are recommended.

B.Inf.1802: Training in Programming	(5 C, 4 WLH)
B.Inf.1701: Advanced Theoretical Computer Science	(5 C, 3 WLH)
B.Inf.1705: Advanced Software Engineering	(5 C, 3 WLH)
B.Inf.1706: Advanced Databases	(6 C, 4 WLH)
B.Inf.1707: Advanced Computernetworks	(5 C, 3 WLH)
B.Inf.1709: Advanced Algorithms and Data Structures	(5 C, 4 WLH)
B.Inf.1710: Advanced Computer Security and Privacy	(5 C, 4 WLH)
B.Inf.1711: Advanced Sensor Data Processing	(5 C, 4 WLH)

b. Furthermore, all modules according to Appendix I number 1) ("Core curriculum") of the Master's degree programme "Applied Computer Science" can be chosen.

3. Sample curriculum

Sem. Σ C	Module package „Computer Science“ (36 C)		
	Modul	Modul	Modul
1. Σ 15 C	B.Inf.1802 Training in Programming 5 C	B.Inf.1701 Advanced Theoretical Computer Science 5 C	B.Inf.1705 Advanced Software Engineering 5 C
2. Σ 16 C	B.Inf.1706 Advanced Databases 6 C	B.Inf.1707 Advanced Computernetworks 5 C	M.Inf.1121 Specialisation Mobile Communication 5 C
3. Σ 5 C	M.Inf.1122 Seminar on Advanced Topics in Telematics 5 C		
Σ 36 C			

III. Module package „Computer Science“ worth a total of 18 C

1. Study objectives

The basic aim is to develop the ability to work independently in the field of systems-oriented computer science. To this end, advanced competences in systems-oriented computer science, e.g. dealing with current scientific literature, are to be acquired.

2. Module overview

Modules totalling at least 18 C must be successfully completed from the following range.

a. The following modules are recommended.

B.Inf.1802: Training in Programming (5 C, 4 WLH)
B.Inf.1701: Advanced Theoretical Computer Science (5 C, 3 WLH)
B.Inf.1705: Advanced Software Engineering (5 C, 3 WLH)
B.Inf.1706: Advanced Databases (6 C, 4 WLH)
B.Inf.1707: Advanced Computernetworks (5 C, 3 WLH)
B.Inf.1709: Advanced Algorithms and Data Structures (5 C, 4 WLH)
B.Inf.1710: Advanced Computer Security and Privacy (5 C, 4 WLH)
B.Inf.1711: Advanced Sensor Data Processing (5 C, 4 WLH)

b. Furthermore, all modules according to Appendix I number 1) ("Core curriculum") of the Master's degree programme "Applied Computer Science" can be chosen.

3. Sample curriculum

Sem. **Σ C**	**Module package „Computer Science“ (18 C)**		
	Modul	Modul	Modul
1. **Σ 6 C**	B.Inf.1706 Advanced Databases 6 C		
2. **Σ 6 C**	M.Inf.1141 Semistructured Data and XML 6 C		
3. **Σ 6 C**	M.Inf.1243 Deductive Databases 6 C		
Σ 18 C			