Combined Faculty of Natural Sciences and Mathematics
Heidelberg University
Regulations concerning the conferral of doctoral degrees

Only the German version of the document entitled “Promotionsordnung der Universität Heidelberg für die Naturwissenschaftlich-Mathematische Gesamtfakultät” (published in the “Mitteilungsblatt des Rektors", September 25th, 2006, page 767 et seq., corrected in “Mitteilungsblatt des Rektors”, December 18th, 2006, page 1199) has legal validity. Last corrected in the "Mitteilungsblatt des Rektors, April 14th, 2014, page 281

Version of 10th of April, 2014

§ 1 Types of doctoral degree, responsible faculties

(1) The combined faculty of Natural Sciences and Mathematics, Heidelberg university, award the academic degree "Doctor of Science" (Dr. rer. nat.); candidates in Geography who submit a doctoral dissertation within the field of human geography and who do not have an undergraduate degree in the natural sciences are awarded the academic degree of Doctor of Philosophy (Dr. phil.).

(2) A Doctoral degree is awarded to candidates who have demonstrated the ability to undertake independent scientific research.

(3) The Natural Sciences and Mathematics faculties accept the recommendations of the University Senate concerning support for young scientists and will implement those recommendations appropriately.

(4) Doctoral degrees will in general be administered by the individual faculties concerned. Doctorates in computer science will however be administered by the combined faculty of Natural Sciences and Mathematics. In the text below, the word "faculty" should be understood to mean 'Combined faculties" for computer science degrees.

(4) An individual faculty may propose that the degree of Doctor honoris causa be awarded in recognition of outstanding scientific work. See regulation § 15.

§ 2 Doctoral requirements

The requirements for a doctorate are a dissertation and an oral defence.

§ 3 Doctoral Degree Committees

(1) Each individual faculty board within the joint faculty of Natural Science and Mathematics elects its own committee to administer the award of doctoral degrees. The Doctoral Degree committee is responsible for the implementation of the doctoral regulations.

(2) The voting members of the Doctoral Degree committee for computer science are elected by the faculty boards for Mathematics and Computer Science and Physics and Astronomy. Nominations are made jointly by the Deans of both faculties.

(3) The Doctoral Degree committee consists of the Dean (acting as chair), a Deputy Dean or Dean of Studies, and at least three university teachers. In this document, the term "university teachers" includes all people who have the right to teach and conduct examinations independently within the faculties concerned (University teaching staff and "Privatdozenten"). The Doctoral Degree committee is elected for a two-year term and re- election of individual members is allowed. The term of office begins from the date of election.
(4) The Doctoral Degree committee for computer science is an exception to paragraph 3. It consists of the Deans of the Faculties of Mathematics and Computer Science and of Physics and Astronomy, and at least four university teachers (as in **§ 3**(3)) who are involved in teaching and research in Computer Science. The chair is taken alternately by the deans of both faculties for the duration of each term of the Doctoral Degree Committee.
(5) Routine tasks of the Doctoral Degree committee are effected by the chair. The committee may decide to entrust particular tasks to the chair and can also reverse such decisions.
(6) Members of the Doctoral Degree Committee have the right to participate in the oral defence of doctoral dissertations.
(7) Applicants are informed of the decisions of the Doctoral Degree Committee in writing and are provided with instructions as to how to appeal.

§ 4 Conditions for admission

(1) Admission to a doctoral degree programme is conditional upon proof that a qualifying university degree has been awarded. Admissible degrees are Diplom, Magister, Master, Staatsexam or international equivalents. The Doctoral Degree committee alone has the authority to recognise the equivalence of international qualifications.
(2) The joint faculties may set a minimum grade in the qualifying university degree as a condition for admission within an individual subject, if this is proposed by the faculty concerned. These minimum grades are listed in appendix 2. Admission of individual applicants whose grades fall below the minimum is subject to approval by the Doctoral Degree committee. When no comparative marking scale is available for international degree grades, the Doctoral Degree committee decides whether the grade is acceptable.

(3) If a candidate took their final examination in a subject different from that in which they wish to write their dissertation they must prove to the Doctoral Degree committee that they possess sufficient specialist knowledge and practical skill in their chosen doctoral subject, usually to the standard of the corresponding final examination (Diplom, Magister, Master, Staatsexam). This also applies to practical skills of candidates who took the Staatsexam and who did not complete their scientific work in the subject in which they wish to pursue their dissertation. Proof of this ability can take the form of previously completed courses or examinations, if these are relevant to the focus of the Faculty concerned and to the intended dissertation theme. Alternatively the student must successfully complete a preparation course as specified by the Doctoral Degree Committee (see paragraph 5). Admission to the subject of Astronomy requires a first degree in either Physics or Mathematics, or proof of appropriate knowledge and ability in one of these subjects.
(4) Particularly well qualified Bachelor students as well as candidates from abroad who do not have a university degree equivalent to that of a Diplom, Master or Staatsexamen may be admitted if their prior performance is deemed exceptional. In this case, candidates may obtain admission to the doctoral programme by taking a preparatory course in accordance with paragraph 5. They can also be advised to take a Masters degree, if this is offered by the department concerned.
(5) The Doctoral Degree Committee decides, in consultation with appropriate subject representatives, whether or not an individual candidate already has sufficient relevant specialist knowledge to be admitted. If not, the Committee decides whether preparative work has to be undertaken, what level of achievement is required, and how much time should be allotted. Candidates may be asked to attend taught courses and complete the corresponding coursework or examinations, or to undertake a research project, or a combination of both. Any research project should be of the same standard as is
expected for the Diplom, Master or Staatsexam. The Doctoral Degree Committee also appoints an evaluator for the research project work, and/or an examiner for an oral examination; both are graded simply as "pass" or "fail". In the oral examination, which should last approximately 1 hour, candidates must

prove that they possess a level of knowledge within their doctoral subject that is equivalent to that expected for a Diplom, Master or Staatsexam. The oral examination may be re-taken once.
(6) Technical college graduates may be admitted to a doctorate if they
a) achieved an above-average final result and
b) complete an entry exam and potential preliminary course successfully. These entry exam and potential preliminary course are overseen by the Doctoral Degree Committee responsible, and the results should provide evidence that the student has appropriate ability and is qualified to undertake research in the intended area. The level of achievement required is fixed by the Doctoral Degree Committee. The procedure should normally be completed after three semesters.
(7) Applicants who have already received a doctoral degree in one of the subjects of the joint faculty of Natural Science and Mathematics are only admitted to a doctorate in a different subject within the joint faculty with the agreement of the joint faculty. Applicants who have already received the degree of "Dr. sc. hum" (Dr. of human sciences) may only be admitted if they can provide proof of a further scientific study serving as the basis for awarding the degree of "Dr. rer. nat" (Doctor of science).
(8) The admission procedure must be completed within six months. If a candidate is admitted to a preparative course of study or is subject to an entry exam under the conditions specified in paragraphs 3-6, the time required is not included within the six month time period.

§ 5 Acceptance of doctoral candidates

(1) Those who fulfil the conditions of admission should, before beginning their dissertation, apply to the relevant Doctoral Degree Committee for acceptance as a doctoral candidate. The application must be accompanied by:
a) Proof of award of a degree (§ 4 paragraph 1) or of the successful completion of a preparation course or entry exam in accordance with § 4 paragraphs 3-6. In exceptional circumstances the Doctoral Degree Committee may allow exceptions.
b) A statement as to whether the applicant has also applied to be accepted as a doctoral candidate at another institution

c) Details of the provisional topic of doctoral research
d) Employment details
e) A statement by applicants who intend to submit their dissertation in geography as to whether they are seeking the degree of Dr.rer.nat. or Dr. phil.
f) A statement from a university lecturer (as laid out in § 3(3)) declaring that they will assume responsibility for supervising the candidate. The supervisor must belong to the relevant faculty. As primary advisor for the student, the supervisor assumes responsibility for providing academic support, an appropriate research environment, and scientific guidance. The Doctoral Degree Committee can appoint a second supervisor, especially for dissertations with interdisciplinary topics. The supervision can also be effected by independent junior research group leaders, provided that such persons have acquired the right to supervise students in accordance with the regulations for independent junior research groups leaders within the Combined Faculty of Natural Science and Mathematics.
(2) Decisions concerning the acceptance of doctoral candidates are made by the chair of the Doctoral Degree Committee. Rejections require the agreement of the Doctoral Degree Committee. Applicants will be notified of the decision in writing. The reasons for rejection must be given along with instructions for appeal.
(3) Regarding paragraph 1 letter e, the Doctoral Degree Committee decides, with reference to the provisional research topic, whether or not the applicant's preference for the degree of Dr. rer.nat. or Dr. phil. is appropriate.
(4) Persons who are performing doctoral research and who have been admitted as doctoral students will be admitted as students of the University for the duration of their research, by maximally for a period as set out in §5 (5), unless they are already members of the University by virtue of an employment contract.
(5) The full doctoral examination procedure should be completed within three years of admission. The maximum time in which the candidate may be registered at the University is five years. Further extensions can be granted if sufficient reasons are provided, such as breaks taken for pregnancy and child care. The status as a doctoral student ends if the primary advisor retracts his

support with good reason. Such a withdrawal requires the consent of the Doctoral Degree Committee.
(6) The Doctoral Degree Committee may agree to a change of supervisor, in accordance with a written application from the student that sets out adequate grounds for the change. If the supervisor becomes unavailable, for example through long-term illness, etc., and the doctoral research is already well advanced, the Doctoral Degree Committee can if necessary appoint a new supervisor in consultation with the doctoral candidate.
(6) Doctoral research is to be done either in an institute within the faculty, or at a research institution held to be equivalent by the university teachers (as in § 3(3)) of the faculty concerned. The Doctoral Degree Committee can decide to make exceptions to this rule.

§ 6 Research plan and doctoral programme

(1) Upon admitting a doctoral student, the Faculty concerned undertakes to examine a final scientific dissertation with the theme already provided, and to support the student appropriately.
(2) The doctoral student and supervisor come to an agreement in which the topic of the doctoral research, the duration of the project and a work plan that is feasable within the time span set out in § 5 (5) are laid down.
(3) If the faculty or institute offers a structured doctoral programme, doctoral candidates are encouraged to take part in order to improve their knowledge base. The extent of participation required is regulated by the faculty concerned, taking into account the obligations of individual doctoral candidates within other graduate programmes in which they are involved.
(3) If a candidate fails to fulfil the requirements for doctoral studies within their subject (research plan, taught programme; see appendix) doctoral admission may be withdrawn.

§ 7 Doctoral dissertation

(1) The dissertation must be of an adequate scientific standard, be a product of the candidate’s own research and contribute new knowledge.
(2) Results of the dissertation may, with the agreement of the candidate’s supervisor, be published in full or in part before admission to the examination

procedure. This includes the possibility of cumulative dissertations. More detailed provisions are specified by the individual faculties concerned (see appendix)
(3) The dissertation is to be written in German or English. English and German summaries of the most important results must be placed before the main text. In exceptional cases the Doctoral Degree Committee may permit the use of a third language.

§ 8 Admission to examination procedure

(1) After completing their dissertation, doctoral candidates admitted in accordance with § 5 must apply to the relevant Doctoral Degree Committee to be admitted to the final examination. Admission is to be decided by the chair. Rejections require the agreement of the Doctoral Degree Committee.
(2) If a candidate who was not previously admitted according to § 5 applies for the final examination, the Doctoral Degree Committee decides whether or not to admit them according to the criteria set out in § 4 and § 5.
(3) The application for admission to the examination procedure is to be accompanied by:
a) Ten printed copies of dissertations within the faculty of Mathematics and Computer Science and for Astronomy; five printed copies in all other cases
b) An official affidavit, as recommended by the federal state of Baden-Württemberg, declaring that the applicant is the sole author of the submitted dissertation and that they have not made use of any sources or help apart from those cited.
c) A statement declaring whether or not the applicant has applied for permission to enter the examination procedure at another institution, has presented the same dissertation to another faculty, or has used the dissertation in its current or in any other form in another examination
d) A tabular curriculum vitae, which should state the nationality of the candidate, list previous courses of study, and show when doctoral work commenced.
e) Certification of state or academic qualifications (see § 4 paragraph 1) in accordance with § 4 paragraphs 3-6

f) Where applicable, a list of taught courses attended in accordance with § 6 paragraph 3
(4) Admission will be refused if the documents are incomplete or if more than one previous attempt at the examination has been unsuccessful.
(5) The candidate can withdraw his or her application for admission to the final examination, so long as neither of the written evaluations has been received by the Faculty or Doctoral Degree Committee.

§ 9 Dissertation evaluation

(1) Immediately after admission to the examination procedure has been granted, the chair of the Doctoral Degree Committee appoints two examiners, one of whom is normally the main supervisor in accordance § 5 paragraph 1 letter f. For interdisciplinary dissertations, the two examiners must have expertise convering the main subjects represented.
(2) The examiners must be university teachers as in **§ 3**(3) and should normally belong to the relevant faculty with the joint faculties of Natural Science and Mathematics at Heidelberg University. The Doctoral Degree Committee can also allow university teachers as in **§ 3**(3) of other faculties or universities to act as examiners. Such external examiners should hold a position comparable to that of a German university teacher as in **§ 3**(3). Leaders of independent research teams can also be named as examiners; for this, the rules of the Faculty of Natural Sciences and Mathematics for admission of group leaders as examiners must be applied.
(3) Doctoral candidates can propose who should be their examiners in accordance with § 10. These proposals must be taken into consideration, but the candidate is not legally entitled to decide on the membership of his or her examination committee.
(4) Written evaluations of the doctoral thesis are to be made independently by the examiners and should be presented within one month of the appointment of the examiners. The examiners propose either acceptance or rejection of the dissertation and, if the thesis is to be accepted, award a grade in accordance with § 11 paragraph 2.

(5) If the examiners do not agree as to acceptance or a rejection, or there is a discrepancy of more than one full point in the mark awarded, the case will be referred to the Doctoral Degree Committee for consideration. If both examiners propose that the dissertation be rejected, the doctoral project is ended. The Doctoral Degree Committee communicates the decision in writing.
(6) The dissertation and evaluations must be made available for inspection by the members of the examination committee (see § 10) and the university teachers (as in **§ 3**(3)) of the faculty for two to six weeks. Alternatively copies can be sent to all relevant people. The way in which this is done may differ from faculty to faculty, but it must be the same for all candidates within any given faculty. Any objections must be communicated to the Doctoral Degree Committee in writing during the inspection or circulation period. In such cases the Doctoral Degree Committee decides how to proceed further. During the inspection or circulation period the professors, university lecturers and private lecturers of the faculty have the right to apply to the Doctoral Degree Committee for the arrangement of further evaluations. The application must be in writing and include the reasons why further evaluation is needed; the power of decision rests with the Doctoral Degree Committee. If no objections are raised, the dissertation is accepted.

§ 10 Examination commission and oral defence

(1) If the dissertation is accepted in accordance with § 9 paragraph 6 the chair of the Doctoral Degree Committee appoints four members of an examination commission and selects the chair. The commission should be composed of the examiners and two other members who are university teachers (as in **§ 3**(3)). Examiners not belonging to the faculty may optionally be appointed to the examination commission. At least two university teachers (as in **§ 3**(3)), including the chair, should belong to the faculty in which the doctorate is taken. The members of the commission must represent at least three subject fields that stand in a meaningful relation to the doctoral subject and/or dissertation, in accordance with the appendix to § 10. The Doctoral Degree Committee can, in response to an application by the candidate, permit the representation of subject fields other than those permitted by the appendix to §10. The Doctoral Degree Committee can also decide that a subject that

would normally be outside the scope of the faculty, but which is highly relevant to the thesis, must be represented at the oral defence.
(2) In the case of doctorates within Mathematics that are not of an interdisciplinary nature the rules are different from those in the preceding paragraph (1). The examination commission consists of at least three members and the fields of pure and applied mathematics must both be represented. In response to an application by the candidate, an area that would normally be outside the scope of the faculty of mathematics and computer science, but which is highly relevant to the thesis and to Mathematics, may be represented at the oral defence. In this case a representative of the extra subject is included as an additional member of the examination commission. Extra subjects that are recognised as relevant are listed in the appendix to § 10 within the subject-specific regulations. In all other cases, the Doctoral Degree Committee decides.
(3) The chair of the Doctoral Degree Committee sets the date of the oral defence in consultation with the members of the examination commission and the candidate. The date should, as a rule, be no later than three months after admission to the examination procedure.
(4) The oral defence is a scientific discussion, in which themes that are either directly, or methodologically, connected with the thesis work are discussed between the examination committee and the candidate. In addition, the commission may ask questions concerning themes that are more broadly related to the overall subject area, as represented by the members of the commission.
(5) The oral defence is led by the chair of the examination committee. It should last between an hour and an hour and a half. The candidate may choose to hold the oral defence in German or in English. A written record of the oral defence must be prepared, and signed by the members of the examination commission.
(6) Doctoral candidates belonging to the faculty are admitted to hear the oral defence, so far as space limitations allow. The public may be excluded if the candidate wishes, or for other strong reasons.

§ 11 Doctoral result

(1) The examination commission decides immediately after the oral defence whether or not a doctorate is to be awarded to the candidate, on the basis of the evaluations of the dissertation and the performance at the oral defence. All members of the examination committee must agree to the award.

(2) In cases where a doctorate is awarded, the oral defence is to be marked by every member of the examination committee according to the following marking scheme:

1,0 = very good

1,5 = very good to good

2,0 = good

2,5 = good to satisfactory

3,0 = satisfactory

3,5 = satisfactory to acceptable

4,0 = acceptable

Only the first number after the decimal place is to be considered; further numbers are deleted without rounding. The overall mark is the average between the average mark for the dissertation and the average mark for the oral defence.

The overall mark is classified as follows:

an average of: 1,0 to 1,5 (inclusive) - magna cum laude (very good)

an average of below 1,5 - 2,5 - cum laude (good)

an average of below 2,5-4.0 - rite (pass)

(3) In cases of an outstanding performance, with an average mark of 1,0, the examination committee may unanimously decide to award the distinction "summa cum laude" (with distinction)

§ 12 Doctoral re-take

(1) If a dissertation is not accepted in accordance with § 9 paragraph 3, the doctoral committee may permit a candidate to make revisions to the work. Alternatively the candidate may, if he or she wishes, be allowed to adopt a new topic, either under the previous supervisor or under a new supervisor. Such permission is granted only once.

(2) The oral defence may be re-taken only once. Any re-take should take place within six months. If the oral defence is not passed at the re-take, the examination procedure is ended.
(3) If the doctoral project is ended according to paragraph 1 or 2, the Doctoral Degree Committee is to communicate this in writing along with instructions for appeal.

§ 13 Publication

The dissertation must be published within two years of the oral defence. Publication is to be made in agreement with the supervisor. The candidate can fulfil the publication requirement by submitting to the faculty:
a) 30 letter-press or photographic-print copies for circulation purposes, or
b) 4 letter-press or photographic-print copies if publication in a journal is secured, or
c) 4 letter-press or photographic-print copies if a professional publisher agrees to a book publication and where a minimum print-run of 150 copies can be proved, or
d) 4 complete original letter-press or photographic-print copies plus an electronic version whose data format and carrier has been agreed with the university library. In this case the candidate must also grant the university library and the German library (DDB) in Frankfurt/Leipzig permission to publish the electronic version in data networks.
The paper copies must be on durable, wood- and acid-free paper, and firmly bound.
(2) If the dissertation is not published within 2 years as described above, all rights connected with the Dr. rer. nat. or Dr. phil. degree are abolished, and the award of the degree from the work is no longer possible. In special cases, the time limit can be extended; for this, an appropriate application, with reasons, must be made before the limit expires. The chair of the doctoral committee can give permission for delays of up to 12 months; beyond that, the whole committee must decide.

§ 14 Conferral of the degree Dr.rer.nat or Dr. phil.

(1) After the publication of the dissertation (§ 13) the title of "Doctor" is conferred and the doctoral certificate is handed or delivered to the candidate. The doctoral certificate records the dissertation topic, the date of degree award, and the overall mark in accordance with § 11 paragraphs 2-3. If the doctorate is graded "pass" no mark is written on the certificate. The date of the oral defence is taken as the day of attaining the doctorate. The certificate is to be signed by the Dean of the joint faculty of Natural Science and Mathematics and the Rector of the university.

(2) Faculty boards can also decide to issue a more detailed doctoral report, containing the title of the dissertation, the date of oral defence, all individual marks and the unrounded overall mark (average of the individual marks) in numerals. Only the first decimal place after the comma is to be mentioned; all further decimal places are to be omitted without rounding. The report is signed by the Dean of the relevant faculty.

(3) The right to use the title of "Doctor" is acquired upon receipt of the doctoral certificate.

(4) If the candidate requests it, an English translation of the doctoral certificate and report are to be provided, again signed by the persons named in paragraph 1 sentence 3. The English version will be marked as a translation of the German original. The Latin version of the overall mark will also be given in the English version of the certificate. The following English terms of explanation are then to be listed alongside in brackets:

1,0* (summa cum laude) ->	excellent
1,0 - 1,5 inclusive (magna cum laude) ->	very good
below 1,5 - 2,5 (cum laude) ->	good

* see § 11 (3)

§ 15 Honorary doctorates, renewal of a doctorate

(1) For outstanding scientific achievement within or at the borders of Natural Science, the joint faculty of Natural Science and Mathematics can confer either the degree of Dr. rer. nat. hon. or, in the case of geography candidates

within the field of human geography referred to in § 1, the degree of DPhil hon.
(2) An application for an honorary doctorate must be made by at least three faculty teachers (as in **§ 3**(3)). The Faculty board concerned decides whether to pass the application on to the joint faculty of Natural Science and Mathematics. A three-quarter majority is required. After receipt of an application the Dean of the joint faculty of Natural Science and Mathematics appoints two referees, in consultation with the faculty making the application. The faculty board decides whether an honorary doctorate is to be awarded after considering the referees' reports. A three-quarter majority is required.
(3) The degree of Dr. rer. nat.hon. or Dr. phil. hon. is conferred by the Dean of the joint faculty of Natural Science and Mathematics through the formal handing over of an honorary doctoral certificate in which the candidate's achievement is highlighted.
(4) In exceptional cases a faculty may renew a doctorate on the occasion of the fiftieth anniversary of the day it was awarded.

§ 16 Withdrawal of applicant's doctoral status or admission to examination procedure; invalidation of doctoral achievement

(1) If, before the doctoral certificate is issued, it emerges that the candidate met the conditions of admission through deception, or essential conditions of admission were mistakenly taken to have been satisfied, the Doctoral Degree Committee may withdraw its admission of a doctoral candidate or admission to the examination procedure. This also applies if facts become known that would justify the withdrawal of a doctoral degree under federal law.
(2) If before the doctoral certificate is issued, it emerges that the candidate used deception in order to meet, or appear to meet, one of the requirements for the doctorate, the Doctoral Degree Committee may invalidate either this particular achievement or all prior achievements. In extreme cases the Committee may withdraw admission to the examination procedure.
(3) The candidate concerned must be allowed to defend him- or her-self before a decision is reached. The candidate is to be informed of the decision, and reasons for the decision and instructions for appeal must be supplied.

§ 17 Withdrawal of doctoral degree

(1) Doctoral degrees can be withdrawn in compliance with federal law. If the law does not specify otherwise, responsibility lies with the board of the faculty in which the doctoral degree was acquired.

(2) The candidate concerned must be allowed to defend him- or her-self before a decision is reached. The candidate is to be informed of the decision; reasons for the decision and instructions for appeal must be supplied.

(3) Paragraphs 1-2 also apply to the withdrawal of an honorary doctorate, except that responsibility lies with the joint faculty of Natural Science and Mathematics.

§ 18 Regulation validity, change-over

(1) The above doctoral regulations come into force on the first day of the month following their publication in the Rector's announcement document, replacing the previous doctoral regulations of the Joint Faculty of Natural Science and Mathematics of 3rd July 2003 ((Mitteilungsblatt des Rektors, vom 18.07.03, S. 377), and on 27th September 2004 (Mitteilungsblatt des Rektors vom 29.09.04, S. 625).

(2) People who started doctoral work before these regulations came into force may be examined in accordance with the previous regulations, if the applicant wishes and if they do not conflict with the state law on universities.

Appendix 1 (to § 10) Doctoral subjects (subject fields):

Astronomy:

- Practical astronomy
- Theoretical astronomy

Biology :

- Biochemistry/Biophysics
- Bioinformatics/ Computational Biology
- Botany
- Molecular biology
- Ecology

- Cell biology
- Zoology

- Chemistry
- Inorganic Chemistry
  - Biological Chemistry
  - Organic Chemistry
  - Physical Chemistry
  - Theoretical Chemistry
- Geo-sciences
  - Geography
    - Human geography
    - Physical Geography
    - Regional research
  - Geology-Palaeontology
    - Applied and Regional geology
    - Isotopic geology
    - Palaeontology
    - Environmental geochemistry
  - Mineralogy
    - Isotopic geology
    - Crystallography
    - Petrology, Geochemistry and Sedimentology
    - Environmental geochemistry
- Computer science
  - Applied computer science
  - Practical computer science
  - Technical computer science
  - Theoretical computer science
- Mathematics
  - Applied mathematics
  - Pure mathematics
- Pharmacy

History of pharmacy

Pharmacology

Pharmaceutical biology and Biotechnology

Pharmaceutical chemistry

Pharmaceutical technology and bio-pharmaceutics

Physics

Applied Physics

Experimental Physics

Theoretical Physics

Appendix 2 (Faculty-specific regulations)

Biological sciences

History of Pharmacy

Candidates seeking admission to the examination procedure in accordance with § 8 and who have written their dissertation within the field of "History of Pharmacy" must include, along with the documentation required by § 8 paragraph 3, written confirmation of their successful participation in the following taught courses:

1. One exercise (Übung) on historical sciences
2. One advanced course (Hauptseminar) on medieval and modern history
3. One basic course (Proseminar) on History of Pharmacy
4. Two advanced courses (Hauptseminare) on "History of Pharmacy"

Addendum to § 6 paragraphs 1-4

1. Organisation, aims and participation in the doctoral programme

(1) The faculty of Biosciences offers a doctoral programme including research-oriented training, in accordance with § 6.

(2) The aims of the doctoral programme are to provide continual support for dissertation research and to further theoretical and practical knowledge in order to prepare the doctoral candidate for future independent scientific activity.

(3) The participation of doctoral candidates registered (in accordance with § 5) within the faculty of Bioscience is obligatory.

2. Supervision of doctoral research

(1) For acceptance of a doctoral candidate in the Faculty of Biosciences, a second supervisor must be appointed in addition to the main supervisor (see § 5 paragraph 1 letter f). The second supervisor must be a university teacher (as in **§ 3**(3)) and should normally belong to the faculty of Biosciences at Heidelberg University. The Doctoral Degree Committee may appoint a university teacher (as in **§ 3**(3)) from another faculty or from another university as a second supervisor. External supervisors must have positions comparable to that of a German university teacher (as in **§ 3**(3)) in order to be accepted (see § 9 paragraph 2). The same applies to independent group leaders.
(2) Doctoral candidates must provide the Doctoral Degree Committee with a written research plan for their dissertation, in agreement with their first and second supervisors, within six months after beginning research. A further written report is to be provided before the end of the second year. If the candidate applies to extend the duration of doctoral training (in accordance with § 5 paragraph 4) a further written report must be provided.
3. Doctoral training
(1) Literature and research seminars of 45-90 min per semester (30-60 min averaged over the whole year) are required. In addition students should spend a similar amount of time attending practical courses, lab rotations, and forums for oral or poster presentation of their own work together with other doctoral candidates. Written confirmation of successful participation in obligatory courses is required.
(2) The seminar series offered by the institutes from within the Faculty of Biosciences that take part in the doctoral programme (in accordance with the appendix to § 10) are also a component of doctoral training. Doctoral candidates are strongly encouraged to attend institute seminars (§ 6 paragraph 2). Candidates may preferentially attend seminars that are thematically and methodologically related to their dissertation, but should also attend presentations of broader interest within the life sciences. Reference is made to the regulations concerning the content of the oral defence (§ 10 paragraph 4).
(3) Successful participation in the doctoral programme is certified on the doctoral report (§ 14 paragraph 2).

Addendum to § 7 paragraphs 2

Cumulative dissertations are not permitted in the Faculty of Bioscience.

Chemistry and Geoscience

Addendum to § 6 paragraphs 2 & 3

Within the subject of chemistry it is not necessary to present a research plan. A doctoral programme is currently not available.

Addendum to § 7 paragraph 2

Cumulative dissertations are not permitted within the subject of chemistry, but are permitted in the subject of Geoscience.

Mathematics and computer science

Addendum to § 6 paragraphs 2 & 3

Within the subject of mathematics and computer science it is not necessary to present a research plan. A doctoral programme is currently not available.

Addendum to § 7 paragraph 2

Cumulative dissertations are not permitted within the faculty of mathematics and computer science.

Addendum to § 10 paragraph 2

If a candidate applies to include an additional subject within their oral defence in accordance with § 10 paragraph 2 the required meaningful relationship to mathematics is adjudged to be present - in addition to the subjects listed in the appendix to §10 - in the following subjects: medicine, philosophy, psychology, economics.

Physics and astronomy

Addendum to § 4 paragraph 2 & 3

The minimum mark required for admission to a doctorate in the faculty of physics and astronomy is fixed at the unrounded overall mark of 2,0. Applicants with a mark worse than the minimum mark may be admitted for

special reasons on an individual basis following a decision of the Doctoral Degree Committee.

Addendum to § 6 paragraph 2

Doctoral candidates should, in agreement with their supervisor, present a research plan to the Doctoral Degree Committee at the latest six months after beginning research.

Addendum to § 6 paragraph 3

Doctoral candidates in physics are obliged to take part in a doctoral programme of the faculty (e.g. that of graduate meetings) to further their subject knowledge. Programmes consist of regular ‘block’ courses, and other events that are denoted as being of relevance. All courses, etc. are to be listed in the application for admission to the examination procedure (§9 paragraph 3 letter f). Candidates are expected to take part in courses totalling 4 teaching units. (This corresponds to 2 hours a week): a full course from the "Graduate Days" counts as 1 teaching unit. The content of the events listed can be examined during the oral defence. For doctoral candidates within astronomy the regulations in the astronomy plan of studies are authoritative. Doctoral candidates who participate in a Deutsche Forschunggemeinschaft (DFG) graduate programme are exempted from the above regulations.

Addendum to § 7 paragraph 2

Cumulative dissertations are permitted within the faculty of Physics and Astronomy, but only if the publications that are used cover the doctoral work, and the work contained can be identified unambiguously as that of the doctoral candidate. In this case, the dissertation must include a convincing Introduction and Summary that clearly place the results in scientific context. More detailed rules are laid down by the Faculty of Physics and Astronomy.

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English translation by James Furner on behalf of the Faculty of Chemistry and Earth Sciences, modifed by Christine Clayton, Feb. 26th 2007 and May 27th, 2014, for the Faculty of Biosciences.

This translation has no legal validity.

Only the german version of the document entitled “Promotionsordnung der Universität Heidelberg für die Naturwissenschaftlich-Mathematische Gesamtfakultät” (published in the “Mitteilungsblatt des Rektors", September 25th, 2006, page 767 et seq., corrected in “Mitteilungsblatt des Rektors”, December 18th, 2006, page 1199) and most recently on 16th May, 2013 (“Mitteilungsblatt des Rektors”, June 28th, 2013, page 591) has legal validity.