

Criteria for the evaluation of Dissertations and Disputations

The points summarized below should serve as an orientation for reports on dissertations and the assessment of thesis defenses. The splitting into three different reviews (first and second supervisor, third examiner) is based on the rules in the doctoral statute that came into effect in 2016. For doctoral examinations under the regulations of the doctoral statute from 2002, the examiners who have not been involved in supervising the thesis research should, if possible, also comment on the points listed below in the section for the second supervisor.

Precondition for thesis submission and opening of the examination procedures:

A doctoral thesis has to proof the ability of the doctoral candidate to independently carry out research in her/his field. It must report new scientific results obtained by the doctoral candidate and their presentation must comply with scientific standards.

Results reported in the doctoral thesis must not have been used before for a doctoral, master or any other thesis. They may have been used for other publications, in particular in scientific journals.

Published papers, submitted manuscripts or manuscripts in preparation that report scientific results obtained during the doctoral research studies can be used as part of the thesis. The existence of published or accepted papers or of manuscripts which are ready for submission is, however, not a precondition for the submission of the thesis. It is not legitimate that supervisors request a certain number of papers or ready manuscripts before agreeing to the thesis submission.

First Supervisor:

Supervisors who closely followed and supervised the thesis research project should comment in their report on the following points:

- The originality and innovativeness of the candidate's contributions to his research field
- The scientific elaborateness of the candidate's research work
- The candidate's depth of understanding of his scientific field
- The quality of the candidate's contributions to publications (concerning research work and writing)
- The self-reliance of the candidate while conducting his research project
- The time and resource efficiency of the candidate's research work
- The amount and quality of assistance used by the candidate
- The amount of preliminary work and legwork done by others for the thesis project
- The logical coherence and scientific accuracy of the presentation of the results in the thesis
- The clarity in the presentation of the state of the research field when the project started
- How convincing is the classification of the results in relation with the actual state of the research field?

Second Supervisor:

Other supervisors who have not been directly involved in the thesis research project should focus in their report on the following points:

- The complexity and difficulty of the candidate's research work and the amount of conducted

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research in relation to the duration of the project.

- The creativity and innovativeness of the candidates research work.
- The accurateness of the documentation of the research work. (Are experiments and/or computations documented such that they can in principle be reproduced by others? Has preliminary work and legwork done by coworker been marked as such?)
- How convincing is the classification of the results in relation with the actual state of the research field?
- How important are the results of the project for the candidates research field?

Third Examiner (not involved in the thesis research):

Examiners who have not been involved in the project or the supervision of the candidate should comment in their report on the following aspects:

- The clarity and logical coherence of the thesis
- The soundness and scientific accuracy of the presentation and discussion of the results obtained in the research project
- The comprehensibility and clarity of the description of the state of the field at the beginning of the thesis research project and of the classification of the results in relation to the actual state of the research field
- The accurateness of the documentation of the research work. (Are experimental and technical details and the obtained data appropriately documented? Have relevant publications of other researchers in the field been cited? If parts of the thesis have been published: Has the candidates own contribution and the contributions of coworker been indicated appropriately?)

Disputation:

The thesis defence is evaluated together by all members of the examination committee. Important criteria are:

A) Presentation:

- How well was the audience introduced into the central problems and the objectives of the thesis research project?
- Was the presentation of the most important results of the project well structured and how convincing were the conclusions drawn from the findings?
- The quality of the oral presentation and the structure of the slides.

B) Examination:

- The scientific correctness and completeness of the candidates answers in relation to the level of difficulty of the examiners questions
- How did the candidate handle the situation when he/she did not know the answer?

The level of difficulty of the examiners questions should be conformable with the grade expected for the disputation based on the grades that were given for the thesis.

Grading Scale:

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The following distribution should be used as orientation for grading the thesis and the disputation:

- mit Auszeichnung (with distinction): the top 17%
- very good (sehr gut): the range between 17-90%
- good (gut): the lowest 10%
- sufficient (befriedigend): the lowest 1-2%

This distribution reflects approximately the average distribution of the last few years at the Faculty of Chemistry and Biochemistry at RUB and also the average distribution in Chemistry and Biochemistry in Germany.

For the overall grade the supplements "+" or "-" should only be used in border cases.

The grade "mit Auszeichnung" (with distinction) should in generally only be given if the standard doctoral study period of 3 years has not been substantially exceeded without good reason. In addition the candidates contribution to scientific publications should be above the standard of the research field (taking into account the length of the doctoral studies). The grade "with distinction" is excluded for the overall grade, if the doctoral research studies (Forschungsstudium) without periods of parental leave or illness exceeded 5 years.