Evaluation by the Doctoral Committee

The aim of the doctoral degree is to train doctoral researchers for independent and critical scientific work, publication activities, and the evaluation of scientific knowledge. The doctoral candidate independently demonstrates in the literature review, results, and discussion sections their ability for scientific, self-critical, and source-critical thinking and writing. They must also understand the broader context to which their dissertation relates.

The language, resolution of images, and texts of figures and tables in the dissertation must be finalized by the time the dissertation is submitted for evaluation by the Doctoral Committee.

The abstract should always be written in English, and if possible, also in Finnish or Swedish. This enhances the dissertation's chances of gaining broader visibility. If the candidate's native language is something other than Finnish or Swedish, the abstract can also be written in that language, thus reaching a wider readership. It is recommended that abstracts are written in no more than three languages.

The literature review provides background for the dissertation topic: it outlines what has been previously researched in the subject area and topic, identifies significant gaps in current knowledge, and explains what the dissertation aims to improve. There are no strict limits on the length of the literature review, but it typically falls within the range of 6,000 to 20,000 words. Additionally, it is recommended to include illustrative images and tables.

The dissertation proposal should clearly present the objectives. The literature review preceding the objectives should clarify why the selected objectives are necessary.

The material and methods and results sections are a synthesis of the methods used, the work conducted, and the results achieved. The methods and results can be presented in a more concise form than in articles to avoid redundancy. If necessary, in a dissertation composed of publications, it is also acceptable to refer directly to the figures of the re-published articles at the end. However, the results section benefits from images and tables that aim for a compact synthesis of the obtained results. They also enliven the dissertation and facilitate reading.

A mature discussion evaluates the achieved research results in light of previous literature and may address the theme more broadly than the discussions of individual publications. A good discussion also addresses the strengths of previous and own research results, as well as critically assesses the limitations of one's own research. The discussion should include a section contemplating future perspectives.

Following the discussion, there should be concise, justified, considered, and clear conclusions. The selection of references demonstrates the candidate's maturity and knowledge of the field. Are key original findings, reviews by leading experts, or lesser-known articles that have been randomly selected referenced? References should be consistently listed, up-to-date, and comprehensive. However, it is rarely necessary to have more than 300 references, even if the topic is broad and well-researched.

Common deficiencies and formal issues leading to the return of the preliminary examination application and requests for corrections from the Doctoral Committee include:

- Ignoring the conflicts of interest mentioned in the guidelines (candidate, supervisors, preliminary examiners, opponent). It should be noted that a conflict of interest is usually real if there is even a suspicion of its existence. In unclear situations, the

candidate (or supervisor) should contact the chair and/or vice-chair of the Doctoral Committee in advance and justify their proposal.

- Incomplete and careless completion of the application.
- Inadequate or incorrect language in the dissertation.
- Content-related deficiencies in images, graphics, results, or text, including issues with resolution, lack of finalization, or immaturity.
- The English and/or Finnish or Swedish abstracts are missing or incomplete. The abstract rarely needs to be longer than 1 to 1.5 pages; the ability to condense content also demonstrates scientific maturity. When writing the Finnish abstract, you may consult your supervisors or fellow researchers for language checking.
- Only part of the authors in the publications is listed; all contributors to the publications deserve to be acknowledged in the dissertation's publication list.
- The titles and affiliations of supervisors, preliminary examiners, and/or the opponent are listed incorrectly or inadequately (consult your supervisors).