

Doctoral and Licentiate Theses at KTH

Doctoral and Licentiate theses at KTH can take one of two forms: a compilation thesis or a monograph thesis. Most doctoral theses at EECS are compilation theses, consisting of a comprehensive summary (referred to as the kappa) and a number of published or submitted papers. Similarly, monograph theses are typically based on results that also have appeared in published or submitted papers. In the following, we will use the term **kappa** to refer to both the kappa of a compilation thesis and the framing sections (e.g., introduction, conclusions, and future work) of a monograph thesis.

The purpose of the kappa

At a high level, the kappa provides you with an opportunity to summarise the main arguments and results arising from the studies carried out during your doctoral research. It also provides an overview of the entire area of your thesis (which encompasses the union of papers it is based on) and may cover aspects not addressed by the individual papers. The kappa allows for a level of abstraction away from the details of the rest of the thesis, to show and argue for a consolidated contribution to your research domain. In practical terms, the kappa is a principal means of achieving the degree objectives for third-cycle education, as outlined in the Higher Education Ordinance. It also serves as an important source of evidence that the student has indeed met these objectives. The kappa also serves to introduce the research topic to a wider audience. For this reason, although not mandatory, we strongly recommend including a popular science summary.

Considerations when writing the kappa

- The kappa must be the student's own intellectual work and should not contain verbatim reproductions of parts of published or submitted manuscripts. All sources, including your own work, must be acknowledged.
- The kappa/monograph is a public document that is available physically and published electronically. It may contain unpublished results, but the public nature of the document must be kept in mind when doing so (e.g., it may prevent future patenting).
- For a compilation thesis, the kappa should function as a self-standing document. It should be comprehensible without reading the papers included in the thesis.

High level structure of the kappa

The structure of the kappa may vary across research domains or even between topics. Below, we list the essential components of the kappa, which can be organized in a way that best suits the specific research field. Note that these components do not need to follow a fixed order and can be combined or arranged differently as needed:

1. **Popular Science Summary** – Provide a summary that communicates the research to a broader audience.
2. **Introduction and Motivation** – Introduce the problems addressed and discuss aspects such as sustainability.
3. **Research Questions** – Clearly state the research questions your thesis addresses.
4. **Thesis Contributions** – Detail the contributions your work makes with respect to the research questions.

5. **Literature Review** – Review the relevant literature for the overall area of the thesis.
6. **Research Gaps and Interrelationships between Papers** – Identify research gaps in the state of the art and explain how the included papers, research gaps, and research questions are connected. Illustrate how the papers interrelate and contribute to a broader understanding of the thesis topic.
7. **Statement of Own Contributions** – Clearly outline your contributions to the thesis results, distinguishing your work from that of co-authors. Use an established taxonomy, such as CRediTⁱ, or provide detailed statements about roles (e.g., XX was responsible for data collection, while YY did the analysis).
8. **Conclusions** – Summarize the findings and discuss their implications.
9. **Future Work** – Suggest potential directions for future research.

Consider the components outlined above as essential elements. These elements are closely aligned with the objectives of the doctoral degree. The table below provides an overview of how different parts of the thesis demonstrate the achievement of specific degree objectives.

Degree Objective (ISP Section 9)	Relevant Components of the Kappa
A1	2, 4, 5, 7, 8
A2	4, 5, 6, 7, 9
B1	5, 6, 8, 9
B2	3, 5
B3	4, 6, 8, 9
B4	The kappa as a whole and the defence.
B5	6, 9
B6	1, 8
C1	By writing the kappa independently with minimal use of co-authored papers. By discussing potential ethical issues in the kappa.
C2	1, 2, 8, 9
Sustainability	2, 8, 9

Formatting and Templates

Please refer to the KTH web [[link](#)] for the most recent template and formatting guidelines.

ⁱ <https://doi.org/10.1087/20150211>, or refer to <https://authorservices.wiley.com/author-resources/Journal-Authors/open-access/credit.html> for a summary.