MSc and PhD Theses

- Objectives
 - Purpose
 - Audience
 - Standard and length
 - Format and content

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Purpose

- Thesis is a required component of research-based graduate degree programs in higher education.
 Difference btw a rigorous thesis-based graduate program and one without thesis
- Demonstrate
 - Mastered the substantial literature in a field
 - Conducted/participated in valuable research
 - Capable of effective technical communication
- Primary vs secondary purposes
- Distribution

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Audience

- Advisory and exam committee members
 - MSc: Usually internal
 - PhD: Most internal and some external
- Other graduate students
- Researchers in the field
- What background knowledge in audience should you assume?

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Standard and Length

- Quality of research
 - MSc: May be required to be "publishable".
 - PhD: May be required to contain published materials.
- Length
 - Normally, there is no strict space requirement.
 - Typically, MSc theses are about 100 pages.
 - Typically, PhD theses are over 200 pages.

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Format

- The overall structure is parallel to a journal article.
- Each major component is written as a chapter.
- Use chapter/section/subsection structures wisely.

Thesis Format

• Front matter

- Title
- Abstract
- Acknowledgements
- Table of contents
- List of tables
- List of figures
- Body of article
 Introduction
 - Literature review
 - Theory and algorithm
 - Experiment and results
 - Conclusion
 - End matter
 - References
 - Glossary
 - Appendixes

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Content

- Literature review: Expected to be more extensive and elaborated than journal articles.
- Theory: Derivations should be more detailed and results be more accessible than journal articles.
- Experiment: Details are expected to be better documented than journal articles.

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