

Structure of a thesis proposal

Your thesis proposal should have the following elements in this order:

- Title page
- Abstract
- Table of contents
- Introduction
- Thesis statement
- Approach/methods
- Preliminary results and discussion
- Work plan including time table
- Implications of research
- List of references

The structure is very similar to that of a thesis or a scientific paper. You will be able to use a large fraction of the material of the thesis proposal in your final senior thesis. Of course, the state of the individual projects at the end of the fall will vary, and therefore also the format of the elements discussed below.

Title page

- contains short, descriptive title of the proposed thesis project (should be fairly self-explanatory)
- and author, institution, department, research mentor, mentor's institution, and date of delivery

Abstract

- the abstract is a brief summary of your thesis proposal
- its length should not exceed ~200 words
- present a brief introduction to the issue
- make the key statement of your thesis
- give a summary of how you want to address the issue
- include a possible implication of your work, if successfully completed

Table of contents

- list all headings and subheadings with page numbers
- indent sub-headings

Introduction

- this section sets the context for your proposed project and must capture the reader's interest
- explain the background of your study starting from a broad picture narrowing in on your research question
- review what is known about your research topic as far as it is relevant to your thesis
- cite relevant references

- the introduction should be at a level that makes it easy to understand for readers with a general science background, for example your classmates

Thesis statement

- in a couple of sentences, state your thesis
- this statement can take the form of a hypothesis, research question, project statement, or goal statement
- the thesis statement should capture the essence of your intended project and also help to put boundaries around it

Approach/methods

- this section contains an overall description of your approach, materials, and procedures
 - What methods will be used?
 - How will data be collected and analyzed?
 - What materials will be used?
- include calculations, technique, procedure, equipment, and calibration graphs
- detail limitations, assumptions, and range of validity
- citations should be limited to data sources and more complete descriptions of procedures
- do not include results and discussion of results here

Preliminary results and discussion

- present any results you already have obtained
- discuss how they fit in the framework of your thesis

Work plan including time table

- describe in detail what you plan to do until completion of your senior thesis project
- list the stages of your project in a table format
- indicate deadlines you have set for completing each stage of the project, including any work you have already completed
- discuss any particular challenges that need to be overcome

Implications of Research

- What new knowledge will the proposed project produce that we do not already know?
- Why is it worth knowing, what are the major implications?

List of references

- cite all ideas, concepts, text, data that are not your own
- if you make a statement, back it up with your own data or a reference
- all references cited in the text must be listed
- cite single-author references by the surname of the author (followed by date of the publication in parenthesis)