## ncsuthesis — NC State Thesis\*

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Released?

#### **Abstract**

The ncsuthesis class provides formatting, macros, and content to meet the thesis requirements of North Carolina State University, specifically the ETD guidelines

### Introduction

Composing the content for a dissertation or thesis is a daunting task. The goal of the ncsuthesis class is to let the author focus on the content while the formatting is handled transparently, in the tradition of ET<sub>E</sub>X.

### **Design Choices**

The NC State guidelines are given in a PDF document at the ETD website. Although parts of the formatting rules are strict, there is still considerable flexibility in formatting the thesis document. A few examples where choices exist follow.

**Font size** Sizes 10 to 12 point is acceptable, although 10 point is probably too small. Consider using 11 or 12 point.

**Type face** Most T<sub>E</sub>X and MT<sub>E</sub>X users use the default Computer Modern fonts. While this type is perfectly acceptable, other options are available that might better suit your taste.

**Heading style** There are lots of headings and section titles in the document, at the top of the *Abstract, Dedication,* and *References* pages, for instance. There are no requirements for these headings, except that that the style be uniform. The nc-suthesis class provides commands that control the styles so that making changes is simple. One common typographical style is to set headings in a sans serif font.

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Line spacing ETD rules permit either 1.5 or double spacing. One and a half spacing will give a look closer to a normal book, but other considerations may tip the scales for double spacing. It is easy to change between the two using ncsuthesis, passing either the onehalfspacing or doublespacing options in the \documentclass declaration.

**Page number location** ETD requirements offer four options: upper right, upper center, lower right, and lower center. The ncsuthesis class places the page number at the bottom center of the page, and does not offer options to easily switch. (It is possible to place it at one of the other locations, but one would need to modify the ncsuthesis.cls source.)

The bottom center was selected for the following reasons. First, the center seems more natural since this is a one-sided document. Second, the bottom was chosen so that the bottom margin would be larger than the top margin. The guidelines require that the page number be one inch from the edge of the paper, and that the rest of the text be two double-spaced lines from the page number. Normally, the page number is set in the margins, but in this case, the rules effectively increase the top (for numbering at the top) or bottom (for numbering at the bottom) margin. Given that either the top or the bottom margin would be larger, the bottom seemed a better choice since page layouts commonly use a larger bottom margin (also see *The Elements of Typographic Style* by Robert Bringhurst or *Getting it Right with Type* by Victoria Squire), whereas a larger top margin is uncommon.

# **Acknowledgements**

The ncsuthesis class was written from scratch, as much as is possible in our internet age. The Penn State Lass written by Professors Gary Gray and Francesco Costanzo was used as a reference for many of the Last programming constructs. The previous NCSU thesis class, from which some of the formatting rules were extracted, had additions made by Eric Adles in March 2007, Jason Brinkley in August 2008, Arnav Jhala in December 2008, Manish Sachdev in January 2008, and Terry Byron.