

Course Outline for MATH 3680, Typesetting with LaTeX

MATH 3680 Typesetting with LaTeX (1 unit)

Prerequisite: Junior standing.

Preparing documents, especially mathematical ones, using the LaTeX typesetting software.

Credit/No Credit grading only. 1 lecture. Formerly MATH 351.

Course Learning Objectives	
1	Create mathematical documents, slideshow presentations and resumés using the LaTeX typesetting software.
2	Typeset mathematical formulae using LaTeX.
3	Use the preamble of a LaTeX document to define document class and layout options.
4	Use nested list and enumerate environments within a LaTeX document.
5	Use tabular and array environments within a LaTeX document.
6	Use various methods to either create or import graphics into a LaTeX document.
7	Use the Beamer class to create presentations.
8	Define and use new commands within LaTeX.
9	Use Theorem, Corollary, and other environments.
10	Use BibTeX to maintain bibliographic information and to generate a bibliography for a particular document.

Expanded Course Content

Textbooks, materials, and/or other resources

The textbook can be chosen by the instructor. Some possible textbooks are:

- Griffiths, David F. and Desmond J. Higham, Learning LaTeX
- Lamport, Leslie, LaTeX: A document preparation system

The expanded course content below is based on Learning LaTeX by Griffiths and Higham.

Week	Readings	Topics of Discussion
1	Section 2.1: Basic LaTeX	Overview of LaTeX typesetting
2	Section 2.2: Type Style	Paragraphs, quotation marks, special symbols
3	Section 2.3: Environments, 5.1. Packages	Types of environments, lists, packages
4	Section 2.3.3: Tables	Creating tables, advanced table styling using packages such as booktabs and tabularx
5	Section 3.1: Examples	Mathematical symbols, font styles, equation environments
6	Section 3.3: Arrays and Matrices	Aligning data in arrays, types of matrix styles
7	Section 5.3: Inputting Pictures	Including graphics, creating figures, captions
8	Section 5.3: Inputting Pictures (continued)	Floating text around images, mboxs, minipages
9	Instructor Notes: Diagrams	Using the package Xy-pic
10	Instructor Notes: Illustrations	Using the package TikZ
11	Section 5.4: Making a Bibliography	Types of bibliographies, bib files, using BibTeX
12	Instructor Notes: Resumés	Sample resumés and styles
13	Section C: A Sample Presentation	Using the Beamer class
14	Section 4.1: Document Classes and the Overall Structure, Section D: A Sample Poster	Advanced custom styles, such as handouts, posters and books
15	Section 3.8: Math Miscellany	Underbraces, sub-stacking, watermarks, etc.

Method of Assessment

The Credit/No Credit grading for this course will be based on participation, and completion of homework and in class exercises. There will be no final assessment.

Instructional Mode

The instructional mode for this class is face-to-face. This designation means that the essential academic standards of the course require in-class student engagement, and thus remote instruction is not appropriate.