PROJECT TITLE

Thesis submitted to the SASTRA Deemed to be University
in partial fulfillment of the requirements
for the award of the degree of

M. Tech. (5 Yr. Integrated) in Power Systems

Submitted by

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(Reg. No.: 1234567890)

June 2022

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Bonafide Certificate

This is to certify that the thesis titled "**Project Title (Title Case - First Letter Caps)**" submitted in partial fulfillment of the requirements for the award of the degree of M. Tech. (5 Yr. Integrated) in Power Systems to the SASTRA Deemed to be University, is a bona-fide record of the work done by **Mr./Ms. AB(Reg. No. 12345678)** (all members name with register no in bracket if applicable) during the final semester of the academic year 2019-20, in the **School of XYZ**, under my supervision. This thesis has not formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title to any candidate of any University.

Signature of Project Supervisor:

Name with Affliation **: Dr. Name (Designation / EEE / SEEE)**

Date **:** 31 / 03 / 2021

Project *Vivavoce* held on

Examiner-I **Examiner-II**

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Declaration

I declare that the thesis titled "**Project Title(Title Case - First Letter Caps)**" submitted by me is an original work done by me under the guidance of **Dr. Xyzzzzzz, Designation, School of Electrical and Electronics Engineering, SASTRA Deemed to be University** during the final semester of the academic year 2020-21, in the **School of Electrical and Electronics Engineering**. The work is original and wherever I have used materials from other sources, I have given due credit and cited them in the text of the thesis. This thesis has not formed the basis for the award of any degree, diploma, associate-ship, fellowship or other similar title to any candidate of any University.

Signature of the candidate(s) :

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ABSTRACT

A LaTeX class along with a simple template thesis are provided here. These can be used to easily write a thesis suitable for submission at IIT-Madras. The class provides options to format PhD, MS, M.Tech. and B.Tech. thesis. It also allows one to write a synopsis using the same class file. Also provided is a BIBTeX style file that formats all bibliography entries as per the IITM format.

The formatting is as (as far as the author is aware) per the current institute guidelines.

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ABBREVIATIONS

IITM	Indian Institute of Technology, Madras
RTFM	Read the Fine Manual

NOTATIONS

r	Radius, m
α	Angle of thesis in degrees
β	Flight path in degrees

CHAPTER 1

INTRODUCTION

1.1 MOTOI

1.2 *****

1.3 *****

1.4 *****

1.5 *****

1.6 Motivation

This document provides a simple template of how the provided `iitmdiss.cls` LaTeX class is to be used. Also provided are several useful tips to do various things that might be of use when you write your thesis.

Before reading any further please note that you are strongly advised against changing any of the formatting options used in the class provided in this directory, unless you are absolutely sure that it does not violate the IITM formatting guidelines. *Please do not change the margins or the spacing.* If you do change the formatting you are on your own (don't blame me if you need to reprint your entire thesis). In the case that you do change the formatting despite these warnings, the least I ask is that you do not redistribute your style files to your friends (or enemies).

It is also a good idea to take a quick look at the formatting guidelines. Your office or advisor should have a copy. If they don't, pester them, they really should have the formatting guidelines readily available somewhere.

To compile your sources run the following from the command line:

```
% latex thesis.tex
```

```
% bibtex thesis
% latex thesis.tex
% latex thesis.tex
```

Modify this suitably for your sources.

To generate PDF's with the links from the `hyperref` package use the following command:

```
% dvipdfm -o thesis.pdf thesis.dvi
```

1.7 Package Options

Use this thesis as a basic template to format your thesis. The `iitmdiss` class can be used by simply using something like this:

```
\documentclass[PhD]{iitmdiss}
```

To change the title page for different degrees just change the option from `PhD` to one of `MS`, `MTech` or `BTech`. The dual degree pages are not supported yet but should be quite easy to add. The title page formatting really depends on how large or small your thesis title is. Consequently it might require some hand tuning. Edit your version of `iitmdiss.cls` suitably to do this. I recommend that this be done once your title is final.

To write a synopsis simply use the `synopsis.tex` file as a simple template. The synopsis option turns this on and can be used as shown below.

```
\documentclass[PhD,synopsis]{iitmdiss}
```

Once again the title page may require some small amount of fine tuning. This is again easily done by editing the class file.

This sample file uses the `hyperref` package that makes all labels and references clickable in both the generated DVI and PDF files. These are very useful when reading the document online and do not affect the output when the files are printed.

1.8 Example Figures and tables

Fig. 1.1 shows a simple figure for illustration along with a long caption. The formatting of the caption text is automatically single spaced and indented. Table 1.1 shows a sample table with the

caption placed correctly. The caption for this should always be placed before the table as shown in the example.

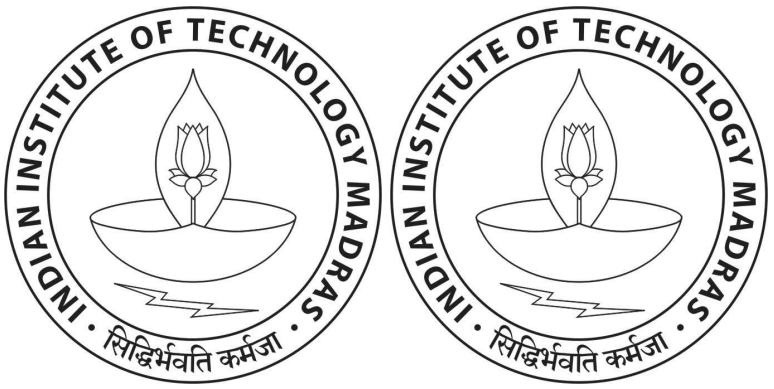

Figure 1.1: Two IITM logos in a row. This is also an illustration of a very long figure caption that wraps around two two lines. Notice that the caption is single-spaced.

Table 1.1: A sample table with a table caption placed appropriately. This caption is also very long and is single-spaced. Also notice how the text is aligned.

x	x^2
1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64

1.9 Bibliography with BIBTEX

I strongly recommend that you use BIBTEX to automatically generate your bibliography. It makes managing your references much easier. It is an excellent way to organize your references and reuse them. You can use one set of entries for your references and cite them in your thesis, papers and reports. If you haven't used it anytime before please invest some time learning how to use it.

I've included a simple example BIBTEX file along in this directory called `refs.bib`. The `iitmdiss.cls` class package which is used in this thesis and for the synopsis uses the `natbib` package to format the references along with a customized bibliography style provided as the `iitm.bst` file in the directory containing `thesis.tex`. Documentation for the `natbib` package should be available in your distribution of LATEX. Basically, to cite the author along with the

author name and year use `\cite{key}` where `key` is the citation key for your bibliography entry. You can also use `\citet{key}` to get the same effect. To make the citation without the author name in the main text but inside the parenthesis use `\citep{key}`. The following paragraph shows how citations can be used in text effectively.

More information on BIBTEX is available in the book by (1). There are many references (1; 2) that explain how to use BIBTEX. Read the `natbib` package documentation for more details on how to cite things differently.

Here are other references for example. (3) presents a Python based visualization system called MayaVi in a conference paper. (4) illustrates a journal article with multiple authors. Python (5) is a programming language and is cited here to show how to cite something that is best identified with a URL.

1.10 Other useful LATEX packages

The following packages might be useful when writing your thesis.

- It is very useful to include line numbers in your document. That way, it is very easy for people to suggest corrections to your text. I recommend the use of the `lineno` package for this purpose. This is not a standard package but can be obtained on the internet. The directory containing this file should contain a lineno directory that includes the package along with documentation for it.
- The `listings` package should be available with your distribution of LATEX. This package is very useful when one needs to list source code or pseudo-code.
- For special figure captions the `ccaption` package may be useful. This is specially useful if one has a figure that spans more than two pages and you need to use the same figure number.
- The notation page can be entered manually or automatically generated using the `nomencl` package.

More details on how to use these specific packages are available along with the documentation of the respective packages.

CHAPTER 2

OBJECTIVES

The objectives of this project are:

-
-
-

CHAPTER 3

EXPERIMENTAL WORK / METHODOLOGY

3.1 *****

3.2 *****

3.3 *****

CHAPTER 4

RESULTS & DISCUSSION

4.1 *****

4.2 *****

4.3 *****

CHAPTER 5

CONCLUSIONS AND FURTHER WORK

A LaTeX class along with a simple template thesis are provided here. These can be used to easily write a thesis suitable for submission at IIT-Madras. The class provides options to format PhD, MS, M.Tech. and B.Tech. thesis. It also allows one to write a synopsis using the same class file. Also provided is a BIBTeX style file that formats all bibliography entries as per the IITM format.

REFERENCES

[1] Leslie Lamport. *LaTeX: A document preparation system*. Addision-Wesley, 1986.

[2] Prabhu Ramachandran. *LaTeX class for dissertations submitted to IIT-M*. PhD thesis, Department of Aerospace Engineering, IIT-Madras, Chennai – 600036, July 2004.

[3] Prabhu Ramachandran. MayaVi: A free tool for CFD data visualization. In *4th Annual CFD Symposium*. Aeronautical Society of India, August 2001. Software available at: http://mayavi.sf.net.

[4] Prabhu Ramachandran, S. C. Rajan, and M. Ramakrishna. A fast, two-dimensional panel method. *SIAM Journal on Scientific Computing*, 24(6):1864–1878, 2003.

[5] Guido van Rossum et al. The Python programming language, 1991–.

PUBLICATIONS

1. Authors.... Title... *Journal*, Volume, Page, (year).

APPENDIX A

FIRST SET DATA

APPENDIX B

SECOND SET DATA

SIMILARITY CHECK REPORT