

L^AT_EX TEMPLATE FOR PROJECT REPORT TO KTU

A PROJECT REPORT

submitted by

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to

the APJ Abdul Kalam Technological University

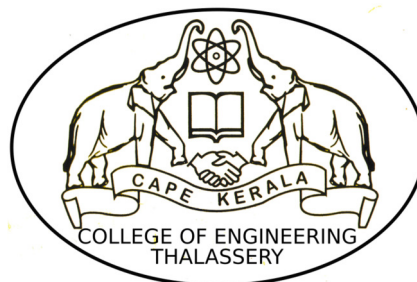
in partial fulfillment of the requirements for the award of the degree

of

Bachelor of Technology

in

MECHANICAL ENGINEERING



DEPARTMENT OF MECHANICAL ENGINEERING

COLLEGE OF ENGINEERING THALASSERY

THALASSERY, KERALA - 670107

MAY 2019

DECLARATION

I/We undersigned hereby declare that the project report "**Title of the project**" , submitted for partial fulfillment of the requirements for the award of degree of Master of Technology of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by me under supervision of **Name of supervisor(s)** . This submission represents my ideas in my own words and where ideas or words of others have been included, I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree, diploma or similar title of any other University.

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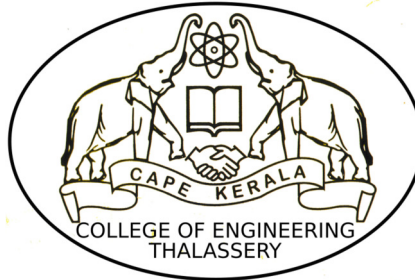
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Date

DEPARTMENT OF MECHANICAL ENGINEERING
COLLEGE OF ENGINEERING THALASSERY



CERTIFICATE

This is to certify that the report entitled **TITLE OF THE PROJECT** submitted by **NAME1(TLY15XXXXX)**, **NAME2(TLY15XXXXX)**, **NAME3(TLY15XXXXX)** and **NAME4(TLY15XXXXX)** to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in (stream & branch) is a bonafide record of the project work carried out by him/her under my/our guidance and supervision. This report in any form has not been submitted to any other University or Institute for any purpose.

Prof. 1
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Date:

ACKNOWLEDGEMENTS

Thanks to all those who made $\text{T}_{\text{E}}\text{X}$ and $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ what is today.

ABSTRACT

A \LaTeX class along with a simple template report are provided here. These can be used to easily write a report suitable for submission to KTU at College of Engineering Thalassery. The class provides options to format PhD thesis, M.Tech. and B.Tech. project reports.

The formatting is as (as far as the author is aware) per the current guidelines by KTU. This Sample Report is used as a reference for preparing this template

KEYWORDS: \LaTeX ; Thesis; Style files; Format.

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LIST OF TABLES

- 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. 2

LIST OF FIGURES

- 1.1 Two CoET 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. 2

ABBREVIATIONS

COET College of Engineering Thalassery
RTFM Read the Fine Manual

NOTATIONS

A	Area, m^2
E	Voltage, V
Re_L	Reynolds Number, $\frac{U_\infty L}{\nu}$

Greek Symbols

α	Thermal Diffusivity, m^2/s
τ	Shear Stress, V
κ	Thermal Conductivity, W/mK
Θ	Non-dimensional Temperature, $\frac{T-T_\infty}{T_0-T_\infty}$

Subscripts

s	Solid
f	Fluid

Superscripts

...	...
...	...

CHAPTER 1

INTRODUCTION

This document provides a simple template of how the provided `cetlyproj.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 report/thesis.

1.1 Instructions

- Install TeXLive, MiKTeX or MacTeX:
- General installation instructions
- Ubuntu: `sudo apt-get install texlive-full`
- Edit `report.tex` file using any text editor.
- TeXStudio preferred: [Download here](#)
- Install on Ubuntu: `sudo apt-get install texstudio`
- You can use any other \LaTeX installation of your choice, but TeXLive Full install will guarantee that all required packages are installed.
- In case you are having trouble using \LaTeX on your machine, simply create an account at ShareLaTeX and create a new project and upload a zip of this project.

1.2 Package Options

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

```
\documentclass[BTech]{cetlyproj}
```

To change the title page for different degrees just change the option from `PhD` to one of `MTech` or `BTech`. 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 `cetlyproj.cls` suitably to do this. I recommend that this be done once your title is final.

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 PDF files. These are very useful when reading the document online and do not affect the output when the files are printed.

1.3 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.

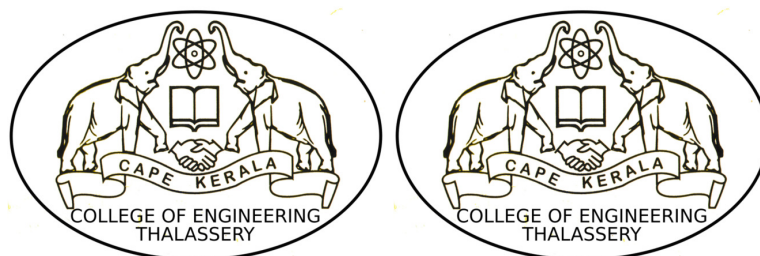


Figure 1.1: Two CoET logos in a row. This is also an illustration of a very long figure caption that wraps around two two lines. Notice that the caption is single-spaced.

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

1.4 Bibliography with BIB_TE_X

It is strongly recommend that you use BIB_TE_X 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.

A simple example BIB_TE_X file along in this directory called `refs.bib`. The `cetlyproj.cls` class package which is used in this thesis uses the `natbib` package to format the references along with a customized bibliography style provided as the `apjktu.bst` file in the directory containing `report.tex`. Documentation for the `natbib` package should be available in your distribution of L^AT_EX. 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 BIB_TE_X is available in the book by Lamport (1986). There are many references (Lamport, 1986; Goossens *et al.*, 1993) that explain how to use BIB_TE_X. Read the `natbib` package documentation for more details on how to cite things differently.

Here are other references for example.Einstein (1905) shows another example to cite an article.Goossens *et al.* (1993) illustrates a book with multiple authors. Python (van Rossum *et al.*, 1991–) is a programming language and is cited here to show how to cite something that is best identified with a URL. Few more examples for citation are provided in following paragraph.

Two models/mechanisms explaining the effect of ultrasonic vibration on grain refinement have been proposed by Eskin (1998): cavitation-enhanced heterogeneous nucleation and dendrite fragmentation. The efficiency of the grain refiner strongly depends on the Al alloy composition, namely the Si content, which determines the most suitable Ti/B ratio in the master alloy and the minimum Titanium concentration in the melt, as reported by Sritharan and Li (1997), which is often difficult to control. Ultrasonic vi-

bration can also be used to refine hypereutectic Al-Si alloys, as demonstrated by Feng *et al.* (2008), who obtained equiaxed α -Al crystals of around 40 μ m and homogeneously distributed primary Si phase with average size of 180 nm in AlSi23 alloy.

1.5 Other useful L^AT_EX 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 L^AT_EX. 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

LITERATURE REVIEW

CHAPTER 3

METHODOLOGY/THEORY/MODELLING

CHAPTER 4

RESULTS AND DISCUSSION

CHAPTER 5

CONCLUSION

REFERENCES

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APPENDIX A

A SAMPLE APPENDIX

Just put in text as you would into any chapter with sections and whatnot. Thats the end of it.