



PhD Dissertation or MSc Thesis template using L^AT_EX style designed for Khalifa University

Student Name

Ph.D. Dissertation

November 2022

A dissertation submitted to Khalifa University of Science and Technology in accordance with
the requirements of the degree of prg in Engineering, in the Department of XXYYZZ



PhD Dissertation or MSc Thesis template using L^AT_EX style designed for Khalifa University

by

Student Name

A Dissertation submitted in partial fulfillment of the
requirements for the degree of

prg in Engineering

at

Khalifa University

Dissertation Defense Committee

Dr. XYZ (Main adviser),
Khalifa University
Dr. XYZ (Co-adviser),
Khalifa University
Dr. XYZ (Co-adviser),
Khalifa University

Dr. XYZ (External Member),
XXX YYY ZZZ
Dr. XYZ (RSC Member),
Khalifa University
Dr. XYZ (RSC Member),
Khalifa University

November 2022

Abstract

Student Name, “**PhD Dissertation or MSc Thesis template using L^AT_EX style designed for Khalifa University**”, PhD Dissertation, prg in Engineering, Department of XXYYZZ, Khalifa University of Science and Technology, United Arab Emirates, November 2022.

abstract text

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

Indexing Terms: Term 1; Term 2; Term 3; Term 4; Term 5; Term 6; Term 7;

Acknowledgments

acknowledgment text

 Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

 Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Declaration and Copyright

Declaration

I declare that the work in this dissertation was carried out in accordance with the regulations of Khalifa University of Science and Technology. The work is entirely my own except where indicated by special reference in the text. Any views expressed in this dissertation are those of the author and in no way represent those of Khalifa University of Science and Technology. No part of this dissertation has been presented to any other university for any degree.

Author Name: _____

Author Signature: _____

Date: _____

Copyright ©

No part of this dissertation may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, without prior written permission of the author. The dissertation may be made available for consultation in Khalifa University of Science and Technology Library and for inter-library lending for use in another library and may be copied in full or in part for any bona fide library or research worker, on the understanding that users are made aware of their obligations under copyright, i.e. that no quotation and no information derived from it may be published without the author's prior consent.

Contents

Abstract	iii
Acknowledgments	iv
Declaration and Copyright	v
Contents	vii
List of Figures	viii
List of Tables	ix
List of Abbreviations and Notations	x
Chapter 1. Chapter 1 Title	1
1.1 Section-Title	2
1.2 Section-Title	2
1.2.1 Section-Title	3
1.3 Subchapter Title	4
1.3.1 Section-Title	5
1.3.2 Section-Title	5
Chapter 2. Chapter 2 Title	6
2.1 Subchapter Title	6
2.1.1 Section-Title	6
2.1.2 Section-Title	7
2.2 Subchapter Title	7
2.2.1 Section-Title	7
2.2.2 Section-Title	7
Chapter 3. Chapter 3 Title	8
3.1 Subchapter Title	8
3.1.1 Section-Title	8
3.1.2 Section-Title	8
3.2 Subchapter Title	8
3.2.1 Section-Title	8
3.2.2 Section-Title	8

Chapter 4. Conclusion	9
4.1 Subchapter Title	9
4.1.1 Section-Title	9
4.1.2 Section-Title	9
4.2 Limitations	9
4.3 Final Outcomes	9
4.4 Future Work	9
Bibliography	10
Chapter A. Appendix A Title	11
Chapter B. Appendix B Title	12

List of Figures

1.1 Figure Example	2
------------------------------	---

List of Tables

2.1 Table Example	6
-----------------------------	---

List of Abbreviations and Notations

Abbreviations

MIP Mixed Integer Program

TP Tactical Planning

Notations

\mathbb{C} Complex numbers

\mathbb{H} Quaternions

\mathbb{R}^+ Positive real numbers

CHAPTER 1

Chapter 1 Title

This thesis/dissertation template is created for the graduate students of Khalifa University. It has the following options.

Calling the class, switching between PhD, MSc, and proposal formats can be in the first line of the .tex preamble.

```
\documentclass[options]{KUThesis}
```

For example:

```
% \documentclass[phd, proposal]{KUThesis}  
% \documentclass[msc, doublespace]{KUThesis}  
% \documentclass[msc, onehalfspace, 11pt]{KUThesis}
```

Available options are:

- phd or msc to switch between msc and phd thesis/dissertation
- singlespace, onehalfspace and doublespace options regulate spacing in the main document singlespace is default
- proposal option will skip printing of some declarations (acknowledgment, declaration, copyright).
- other options of the report class can be used here as well (page size, font, etc.)

Next, the author and thesis/dissertation options need to be provided:

```
\title{...} – Title of the thesis
```

```
\author{...} – Student name. It will be automatically inserted where needed.
```

\department{...} – Title of the department (skip “Department of”)

\studyprogram{...} – Full title study program, for example “PhD in Engineering” or “Engineering Systems and Management”

\addrscmember{Dr. XYZ}{Role}{Affiliation} – Up to 8 RCS members; It will be arranged in two columns, 4 and 4. Use empty declarations where needed.

\date{...} – The Date can be hardcoded or current, the printed date will be automatically formatted to Month, Year.

\abstract{...} – Only the abstract text needs to be provided. It will be prepended by the paragraph with the student name, thesis title, etc.

\addidxterm{...} – Index term that will be appended after the abstract. Up to 8 terms are supported.

\acknowledgment{...} – Acknowledgment text. Add some dummy text in the proposal mode.

\nomenclature[group]{...}{...} – Abbreviations and Notations. See `Nomenclature.tex` for extra explanations and examples.

The rest of the document can be formatted using different L^AT_EX options. Please see <https://www.overleaf.com/learn> for more details and examples.

1.1 Section-Title



Figure 1.1: Figure Example

Please see Figure 1.1 for an example of a figure. Use \label and \ref for cross-referencing figures, tables, equations.

1.2 Section-Title

Here is an example of a citation. Please see reference [1] and [2, 3, 1, 4, 5].

1.2.1 Section-Title

 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

 Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

 Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

 Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

 Fusce mauris. Vestibulum luctus nibh at lectus. Sed bibendum, nulla a faucibus semper, leo velit ultricies tellus, ac venenatis arcu wisi vel nisl. Vestibulum diam. Aliquam pellentesque, augue quis sagittis posuere, turpis lacus congue quam, in hendrerit risus eros eget felis. Maecenas eget erat in sapien mattis porttitor. Vestibulum porttitor.

Nulla facilisi. Sed a turpis eu lacus commodo facilisis. Morbi fringilla, wisi in dignissim interdum, justo lectus sagittis dui, et vehicula libero dui cursus dui. Mauris tempor ligula sed lacus. Duis cursus enim ut augue. Cras ac magna. Cras nulla. Nulla egestas. Curabitur a leo. Quisque egestas wisi eget nunc. Nam feugiat lacus vel est. Curabitur consectetur.

1.3 Subchapter Title

Suspendisse vel felis. Ut lorem lorem, interdum eu, tincidunt sit amet, laoreet vitae, arcu. Aenean faucibus pede eu ante. Praesent enim elit, rutrum at, molestie non, nonummy vel, nisl. Ut lectus eros, malesuada sit amet, fermentum eu, sodales cursus, magna. Donec eu purus. Quisque vehicula, urna sed ultricies auctor, pede lorem egestas dui, et convallis elit erat sed nulla. Donec luctus. Curabitur et nunc. Aliquam dolor odio, commodo pretium, ultricies non, pharetra in, velit. Integer arcu est, nonummy in, fermentum faucibus, egestas vel, odio.

Sed commodo posuere pede. Mauris ut est. Ut quis purus. Sed ac odio. Sed vehicula hendrerit sem. Duis non odio. Morbi ut dui. Sed accumsan risus eget odio. In hac habitasse platea dictumst. Pellentesque non elit. Fusce sed justo eu urna porta tincidunt. Mauris felis odio, sollicitudin sed, volutpat a, ornare ac, erat. Morbi quis dolor. Donec pellentesque, erat ac sagittis semper, nunc dui lobortis purus, quis congue purus metus ultricies tellus. Proin et quam. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Praesent sapien turpis, fermentum vel, eleifend faucibus, vehicula eu, lacus.

Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Donec odio elit, dictum in, hendrerit sit amet, egestas sed, leo. Praesent feugiat sapien aliquet odio. Integer vitae justo. Aliquam vestibulum fringilla lorem. Sed neque lectus, consectetur at, consectetur sed, eleifend ac, lectus. Nulla facilisi. Pellentesque eget lectus. Proin eu metus. Sed porttitor. In hac habitasse platea dictumst. Suspendisse eu lectus. Ut mi mi, lacinia sit amet, placerat et, mollis vitae, dui. Sed ante tellus, tristique ut, iaculis eu, malesuada ac, dui. Mauris nibh leo, facilisis non, adipiscing quis, ultrices a, dui.

Morbi luctus, wisi viverra faucibus pretium, nibh est placerat odio, nec commodo wisi enim eget quam. Quisque libero justo, consectetur a, feugiat vitae, porttitor eu, libero. Suspendisse sed mauris vitae elit sollicitudin malesuada. Maecenas ultricies eros sit amet ante. Ut venenatis velit. Maecenas sed mi eget dui varius euismod. Phasellus aliquet volutpat odio. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Pellentesque sit amet pede ac sem eleifend consectetur. Nullam elementum, urna vel imperdiet sodales, elit ipsum pharetra ligula, ac pretium ante justo a nulla. Curabitur tristique arcu eu metus. Vestibulum lectus. Proin mauris. Proin eu

nunc eu urna hendrerit faucibus. Aliquam auctor, pede consequat laoreet varius, eros tellus scelerisque quam, pellentesque hendrerit ipsum dolor sed augue. Nulla nec lacus.

Suspendisse vitae elit. Aliquam arcu neque, ornare in, ullamcorper quis, commodo eu, libero. Fusce sagittis erat at erat tristique mollis. Maecenas sapien libero, molestie et, lobortis in, sodales eget, dui. Morbi ultrices rutrum lorem. Nam elementum ullamcorper leo. Morbi dui. Aliquam sagittis. Nunc placerat. Pellentesque tristique sodales est. Maecenas imperdiet lacinia velit. Cras non urna. Morbi eros pede, suscipit ac, varius vel, egestas non, eros. Praesent malesuada, diam id pretium elementum, eros sem dictum tortor, vel consectetur odio sem sed wisi.

1.3.1 Section-Title

1.3.2 Section-Title

CHAPTER 2

Chapter 2 Title

Table 2.1: Table Example

header 1	header 2
Cell A	Cell B
Cell C	Cell D

2.1 Subchapter Title

Please see Table 2.1 for an example of a table.

2.1.1 Section-Title

Example of an inline equation ($\sqrt{a^2 + \beta + b^2}$), and display equations, numbered like (2.1) or not numbered.

$$F(x) = \frac{\sin x}{x}$$

$$F(x) = \frac{\cos x}{x} \tag{2.1}$$

or aligned into a system.

$$\begin{aligned} f(x) &= \min_y x + y \\ f(y) &= \frac{\partial}{\partial y} \left[\int_0^y (\alpha x + \beta) dx \right] \end{aligned} \tag{2.2}$$

Use `\begin{align*} ... \end{align*}` for systems of equations without numbers.

2.1.2 Section-Title**2.2 Subchapter Title****2.2.1 Section-Title****2.2.2 Section-Title**

CHAPTER 3

Chapter 3 Title

3.1 Subchapter Title

3.1.1 Section-Title

3.1.2 Section-Title

3.2 Subchapter Title

3.2.1 Section-Title

3.2.2 Section-Title

CHAPTER 4

Conclusion

4.1 Subchapter Title

4.1.1 Section-Title

4.1.2 Section-Title

4.2 Limitations

4.3 Final Outcomes

4.4 Future Work

Bibliography

- [1] J. Kramer, “Abstraction: The key to software engineering?,” *Keynote: JSSST Japan Society for Software Science and Technology Conference*, 2004.
- [2] G. Booch, “Object-oriented design,” *Ada Lett.*, vol. I, no. 3, pp. 64–76, 1982.
- [3] H. Kaindl, “Is object-oriented requirements engineering of interest?,” *Requirements Engineering*, vol. 10, no. 1, pp. 81–84, 2005.
- [4] S. Shlaer and S. J. Mellor, *Object-oriented systems analysis: modeling the world in data*. Yourdon Press, 1988.
- [5] O.-J. Dahl, B. Myhrhaug, and K. Nygaard, *SIMULA 67 Common Base Language*. Oslo, Norway: Norwegian Computing Centre, 1968.

APPENDIX A

Appendix A Title

APPENDIX B

Appendix B Title
