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AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ENGINEERING (LOGISTICS AND SUPPLY CHAIN SYSTEMS ENGINEERING) SIRINDHORN INTERNATIONAL INSTITUTE OF TECHNOLOGY THAMMASAT UNIVERSITY ACADEMIC YEAR 2020

THAMMASAT UNIVERSITY

SIRINDHORN INTERNATIONAL INSTITUTE OF TECHNOLOGY

INDEPENDENT STUDY

BY

INTERNATIONAL INSTITUTE

ENTITLED

INDEPENDENT STUDY TITLE

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was approved as partial fulfillment of the requirements for

the degree of Master of Engineering (Logistics and Supply Chain Systems Engineering)

on July 8, 2020

Chairperson

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(Assistant Professor International Institute, Ph.D.)

Member and Advisor

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(Associate Professor International Institute, Ph.D.)

Member and Co-advisor

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(International Institute, Ph.D.)

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(Professor Pruettha Nanakorn, D.Eng.)

Independent Study Title	INDEPENDENT STUDY TITLE
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	INDEPENDENT STUDY TITLE
Author	International Institute
Degree	Master of Engineering (Logistics and Supply Chain Systems Engineering)
Faculty/University	Sirindhorn International Institute of Technology/ Thammasat University
Advisor	Associate Professor International Institute, Ph.D.
Co-Advisor	Samad Rakdee, Ph.D.
Academic Years	2020

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ABSTRACT

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Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering. It also offers a Master of Science Program in Engineering and Technology and Doctor of Philosophy Program in Engineering and Technology.

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering. It also offers a Master of Science Program in Engineering and Technology and Doctor of Philosophy Program in Engineering and Technology. Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics

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Keywords: Periodic solids, Effective properties, Extreme properties, Design automation, Material design

ACKNOWLEDGEMENTS

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International Institute

TABLE OF CONTENTS

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LIST OF TABLES

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Tables numbering indicates the number of the tables are contained in. Thus, all the tables in this chapter begin with "3" to indicate that the section is located in Chapter 3. As the tables levels descend in order, the numbers grow by one additional digit for each level, showing the relationship between the groups of tables.

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LIST OF FIGURES

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LIST OF SYMBOLS/ABBREVIATIONS

Symbols/Abbreviations	Terms
SIIT	Sirindhorn International Institute of Technology
TU	Thammasat University

CHAPTER 1

INTRODUCTION

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering.

1.1 Main heading

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering (Chen & Winterbone, 2014).

Garlotta (2001) stated that "Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering" (p.63).

1.2 Main heading

A study performed by Tokiwa and Calabia (2006) showed that Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering.

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Citing References in Text at The End of a Sentence: One Work by Multiple Authors
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Citing References in Text: One Work by One Author
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Citing Reference in Text: One Work by Two Authors in Part of the Narrative
Cite the surname of the authors (do not include suffixes such as *Jr.*) and join the surnames by and, the year of publication be inserted in the text in the parentheses () or at the appropriate point.

1.2.1 Sub-heading 1

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering (Bocchini & Frache, 2013; Smith, 2005).

1.2.1.1 Sub-heading 2

Prokop, Helling, Hahn, Udomkaewkanjana and Rehm (2008) demonstrated Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering.

1.2.1.2 Sub-heading 2

Montanari et al. (2003) found Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering.

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering.

1.3 Main heading

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication

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Citing References in Text: One Work by Multiple Authors Whereas Name of Authors Appear as Part of the Narrative
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Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering.

CHAPTER 2
REVIEW OF LITERATURE

2.1 Main heading

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology. Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs.

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology.

2.2 Main heading

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology.

2.2.1 Sub-heading 1

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2.2.1.1 Sub-heading 2

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2.2.1.2 Sub-heading 2

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology. Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs.

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology. Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs.

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2.3 Main heading

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology.

CHAPTER 3

INSERT TOPIC

3.1 Main heading

Sirindhorn International Institute of Technology (SIIT) offers three master of engineering programs, namely, Master of Engineering Program in Engineering Technology, Master of Engineering Program in Information and Communication Technology for Embedded Systems, and Master of Engineering Program in Logistics and Supply Chain Systems Engineering:

  a. Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT),
  b. Sirindhorn International Institute of Technology (SIIT),
  c. Sirindhorn International Institute of Technology (SIIT).

Data of Sirindhorn International Institute of Technology (SIIT) are given in Table 3.1.

Table 3.1 Sirindhorn International Institute of Technology (SIIT).

Item	Sirindhorn International Institute of Technology			
	International 1		International 2	
1	15.30	11.20	25.20	11.15
2	15.40	15.20	15.10	21.15
3	15.15	13.20	16.22	18.30
4	15.24	14.20	18.45	19.47

3.1.1   Sub-heading 1

The model of Sirindhorn International Institute of Technology (SIIT) is shown in Figure 3.1.

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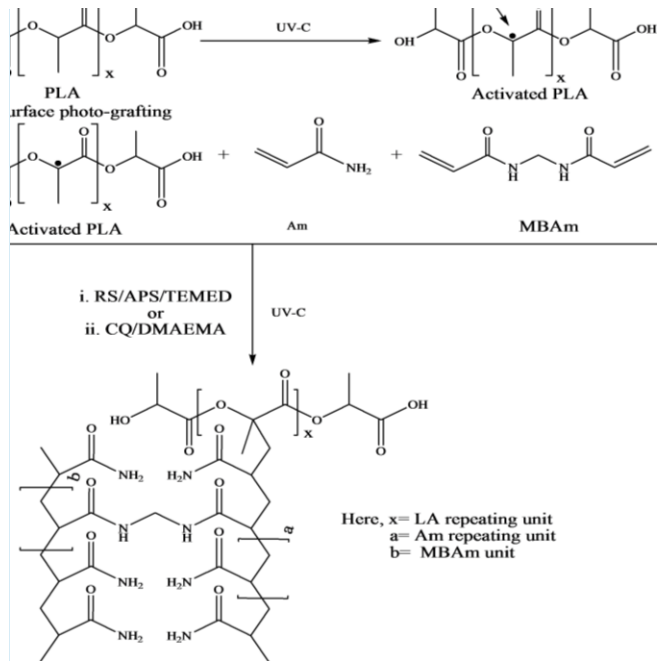**Commented [r87]:** Always align your table with the left margin.

Figure 3.1 Sirindhorn International Institute of Technology (SIIT).

Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT).

Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT). Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT). The moving average equation for replacing the outliers is given by the following equation:

$$L_t^p(d) = \int_0^L \sigma_{ij}^n(x)\epsilon_{ij}(x)\Delta_t^p(d)dx \tag{3.1}$$

where $L_t^p(d)$ is the estimated load for the outlier detected at time period t of day d, and n is set to 2.

Equation (3.1) shows Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT). The parameters are given as

$$e_t(d) = L_t(d) - F_t(d) \tag{3.2}$$
$$e_t^p(d) = L_t^p(d) - F_t^p(d). \tag{3.3}$$

Equation (3.2) and Equation (3.3) are Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT) Sirindhorn International Institute of Technology (SIIT).

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APPENDICES

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APPENDIX A

APPENDIX TITLE

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APPENDIX B

APPENDIX TITLE

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BIOGRAPHY

Name   International Institute

Education   2009: Bachelor of Engineering (Chemical Engineering)

         Sirindhorn International Institute of Technology

         Thammasat University

         2010: Master of Science (Environmental Science)

         Thammasat University

Publications

Institute, I., Foo, M. E., & Gopinath, S. C. B. (2017). Feasibility of graphene in biomedical applications. *Biomedicine & Pharmacotherapy, 94*(Supplement C), 354-361.

Institute, I., Hanot, C. C., Choi, Y. S., Anani, T. B., Soundarrajan, D., & David, A. E. (2015). Effects of iron-oxide nanoparticle surface chemistry on uptake kinetics and cytotoxicity in CHO- K1 cells. *International Journal of Molecular Sciences, 17*(1), 226-230.

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