

BHIKSU UNIVERSITY OF SRI LANKA

UNDERGRADUATE FINAL YEAR DISSERTATION GUIDELINES

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PREFACE

Research experience is intended to provide students with exposure to research methods and an opportunity to work closely with a faculty-appointed supervisor/s. Preparation of a comprehensive written research report is an essential part of a valid research experience, and the student should be aware of this requirement at the outset of the Research.

While researches vary in their aims, scope and design, they should be designed so as to allow the student to demonstrate their ability to apply the principles of research at an undergraduate level. These guidelines provide information on the scope of research and what students should aim to achieve, how to plan research, important considerations, and what examiners/ supervisors will be looking for.

1. **RESEARCH FORMULATION**

1.1 Introduction to the Undergraduate Research

Learning how to conduct ethical research is a vital part of a student's educational experience. It is often the first major place of independent research that student undertakes in their life. Hence, in a sense, the aims of undergraduate research encompass both intellectual and skills development. A proper guidelines and better supervision can enhance as well as promote better performance of the student at this level. Further, a good teaching method helps the students to question their preconceptions and motivates them to learn by putting them in a situation in which they come to see themselves as the author of answers and the agent of responsibility for change. The undergraduate research often places its objectives to (i) analyze problem-solving skills (ii) active learning through the identification of a problem to be explored and completed (iii) skills development for independent research and (iv) application of academic knowledge.

The research is carried out in the first and second semesters of the fourth year. The SLQF stipulates that an undergraduate, reading for a degree at Level 6, should complete a research component equivalent to a total of at least 6 credits of SLQF level 6, which is one credit equivalent to a minimum of 100 notional hours. The research should carry out under the supervision of a

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qualification holder of level 10, 11 or 12. The research should focus on a well-defined problem that stands a reasonable chance of completion in the time available. To be eligible to award the bachelor of honours degree it is expected to complete research activities and submit a final research report/dissertation.

By the end of the research students should be able to,

- > understand the basic research principles and methods
- > demonstrate the ability to think critically and integrate theory with practice
- design a study to answer a research question
- > synthesize and critically analyze past research in the field of study
- > assess scientific evidence and arrive at conclusions by way of logical deduction

In this context, the aim of this guideline is to provide supervisors and students a uniform framework for the conduction of undergraduate research work within the given time frame.

1.2 Guideline for Research Proposal

A research proposal describes an intended study in detail. Its components include the title, abstract, table of contents, literature review, methods, results and discussion. The introduction is written in the present tense. The literature review is written in the past tense. The methodology is written in the future tense.

When preparing the research proposal few important factors should be taken into account such as scope of the research, motivation and the possibility of completing by the given time frame. The research proposal should not exceed more than 5 pages and key components of the Research proposal are as follows.

1. **Title:** The title of the research should not exceed 15 - 20 Words (It may be exceeded slightly based on the research carried out).

2. Proposer: Name of the student and the student registration number.

3. Introduction: This section provides the background of the research, the rationale for selecting the research topic and outlines the significance of the study.

4. Literature Review: This section presents a review of relevant literature that has been conducted up to the time commencing the placing of the student's research within its

broader context. It demonstrates an understanding of previous studies and theories related to the research topic.

5. Research Problem/Problem Statement: The research problem/problem statment is a description of the issue that the student will solve through their research. The student may write the research problem as a question/s or a statement.

6. Objectives of the Research: Based on the research question/s, the student may develop objectives of the research.

7. Methodology: This section should present a clear, concise and compelling rationale for the research philosophical background of the selected methododlogy, (research site, population, sampling method and sample size (if required)), data collecting method and data analyzing method.

8. Chapter Organization: The sequence and structure of chapters should align with the logical progression of ideas within the study area.

9. Timeframe: This section presents a timeline or schedule outlining when different aspects of the research will be completed. It helps in planning and ensuring timely completion of various tasks involved in conducting the study.

10. References: Use Harvard or APA or Chicago Style.

1.3 Guideline for Chapter Organization

The chapter is introduced in two (02) models as below. The student may select one of the models relevant to his research topic, nature and field of study, and follow the instructions of the supervisor of the research. These models can be slightly changed according to the supervisors' guidance.

	Model - 01		
	1. Introduction		
1 st Chapter	1.1 Background of the Research		
-	1.2 Literature Review and Research Gap/s		
	1.3 Research Problem/Problem Statement		
	1.4 Objectives of the Research		
	1.5 Methodology		

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2 nd Chapter	 2. Analytical Chapter (Student may create a title/ theme relevant to the content of this analytical chapter) 2.1 Introduction (Brief Introduction of the Content) 2.2 Subtopic/ sub-theme 2.3 Subtopic/ sub theme(including your subtopic/sub theme as following 2.4, 2.5, etc)
3 rd Chapter	3. Analytical Chapter (Student may create a title/ theme relevant to the content of this analytical chapter)
	3.1 Introduction3.2 Subtopic/sub-theme
4 th Chapter (It can be divided into more chapters appropriate to the objectives/ result of the research and recommended by the supervisor/s)	4. Analytical Chapter (Student may create a title/ theme relevant to the content of this analytical chapter)
Final Chapter	Final Chapter 6.1 Conclusions 6.2 Recommendations
References	Use Harvard/APA/ Chicago Reference Style
Appendices	If Available

Model - 02	
	1. Introduction
	1.1 Background of the research
1 st Chapter	1.2 Research Problem/Problem Statement
	1.3 Objectives of the Research
	1.4 Significance of the research
	1.5 Chapter outline of the dissertation
	2. Literature Review
2 nd Chapter	2.1 Introduction (Brief Introduction of the Chapter Content)
_	2.2 Conceptual Analysis
	2.3 Theoretical Analysis
	2.4 Detailed survey/review of previous research

	2.5 Identifying Research Gap/s (if necessary, this topic can
	be combined with other topics)
	3. Research Methodology
	3.1 Introduction
	3.2 Philosophical Background of the Research
3 rd Chapter	3.3 Conceptual Framework
	3.4 Hypothesis
	3.5 Introduction of the Research Site
	3.6 Population, Sampling and Sample Size
	3.6.1 Population
	3.6.2 Sampling Method
	3.6.3 Sample Size
	3.7 Data Collection Method
	3.8 Data Analysis Method
	3.9 Limitations of the Research
	3.10 Research Ethics Reviews (if applicable)
	4. Results and Discussion*
4 th Chapter	4.1 Introduction
	4.2 Main Topic/ Result/s
	4.2.1 Subtopic/s
	4.2.2 Subtopicetc
	4.3 Main topic
	5. Conclusion/s and Recommendation/s**
	5.1 Conclusions
5 th Chapter	5.2 Recommendations
References	Use Harvard/APA/Chicago Reference Style
Appendices	If Available

* The Results and Discussion chapters can be divided into 4th and 5th chapters, if necessary.

** The Conclusions and Recommendations chapters can be divided into separate chapters if necessary.

2. FINALISING THE DISSERTATION

The dissertation is a factual, logical and possibly sequential record of the research work on a specific problem carried out over an extended period of time. It clearly specifies the problem of the dissertation, the work carried out to reach the solution and the results obtained. In simpler terms, it is a record/ report of a research.

The word count of the dissertation could be about 10000 - 15000. When the students are composing the dissertation, the following structure could be adapted.

- Title Page
- Declaration
- Acknowledgements
- Abstract
- List of Content
- Chapters .1, 2,
- References
- Appendices 01 (Supervisors Meeting form)
- Appendices 01 (If available)

Acknowledgement: acknowledge the assistance given by the supervisors, and any other person or organization that has helped conduct the research.

Abstract: is a concise summary of a research paper or entire dissertation. This should be 250–300 words long and should be very clear and easy to follow. It is recommended to include quantitative or qualitative outcomes of the research in brief.

Introduction: allows orienting the reader to the research and previewing the organization of the dissertation. Simply this section is used to give an overview of the research problem, aims, and objectives.

Literature review: a survey of scholarly sources that provides an overview of a particular topic. Literature reviews are a collection of the most relevant and significant publications regarding the research problem. It is required to cite appropriately when the students draw conclusions from current works.

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Methodology: describes how your research was conducted. This information allows readers to check whether your approach is accurate and dependable. It should include research design, study population, sample size and method, survey design, survey or data collection instruments, protocol for obtaining data, ethical issues if any and how they are addressed, data management and analysis methods and statistical analysis and tests.

Results: describes the key findings of the study, and is often considered the core of the paper. The study's data should be presented in a logical sequence without bias or interpretation. Findings may be reported in written text, tables, graphs, and other figures. All tables, figures and graphs, should be numbered consecutively throughout the whole dissertation, and labelled with a clear and concise descriptive title.

Discussion: is to (1) interpret your results, (2) discuss the significance of your results, (3) place your work in the context of previous work, (4) discuss the limitations of your study, and (5) suggest next steps to advance understanding and/or to improve real-world situations.

Conclusion: gives a convincing summary of the dissertation's findings. It also needs to reflect what the initial research aims, and objectives were.

Recommendations: are suggestions and solutions given for certain situations based on obtained results.

References: is the process of acknowledging all the sources that are used in research work. Proper citation allows others to locate the materials that have been used in the dissertation. Students are expected to avoid plagiarism. Students are advised to follow the Harvard/APA/Chicago style for creating References.

Appendices: this is a useful tool for providing additional information or clarification that doesn't need to be included in the main body of the dissertation.

3. GUIDELINES FOR STUDENTS AND SUPERVISORS

3.1 **Responsibilities of the Student**

Students should bring some technical, interpersonal, communication and creative thinking skills to the Research. The essential responsibilities of the student researcher are outlined here.

- Explore possible research topics that reflect interests and preparation. Pick a topic that truly interests.
- > Identify the knowledge, experience, and skills that you will need to complete the research.
- Should have a preliminary discussion with supervisor/s before initiating the research.
- Develop a time frame and a system of communication with the supervisor during the research period that will allow for an appropriate balance of supervisor guidance and student independence.
- It is a requirement that the students should be involved in the research work at least 600 hours and complete it (including the dissertation writing) within that period.
- It is important to maintain a work diary and need to update the diary regularly with important decision after meeting with the supervisor. At least to have 10 meetings with the supervisor during the research period.
- Students are highly encouraged to refer library and other academic journals, while they are conducting literature surveys and getting assistance from the librarian for inter faculty library loan.
- The students should maintain a friendly environment with supervisors and colleagues in laboratories in the faculty and research stations.
- The students should keep informed supervisor and course coordinator if any problem is raised interrupting their research work.
- Submit the final report or dissertation to the supervisor by the agreed deadline.

> Conducting research with integrity, in accordance with the University's policy framework.

3.2 Role of the Supervisor

Effective student supervision requires knowledge and understanding about the research. Supervisors should be prepared to provide well-informed advice on academics and professional development of a student. More specifically, supervisors should have following advisory role.

- > The development and construction of a research topic and proposal.
- > A research plan that is appropriate in breadth, depth and time to completion.
- > Establish effective communication by having regular meeting with the student.
- Providing timely, constructive and effective feedback on the work and overall progress within the programme and inform students that the progress is satisfactory or not.
- Advise students to adhere to the University's regulations, policies and guidance regarding those relating to health and safety, and intellectual property.
- > Improvement of research activities, composing dissertations and presentations.
- Review the draft of a research dissertation, and presentation slides and provide appropriate suggestions to improve them.
- Where appropriate, help and encourage students to submit conference papers and articles to refereed journals.

4. EVALUATION CRITERIA

This section considered the information on the assessment criteria of the research proposal, final dissertation and the final presentation.

4.1 Factors to be considered before the Evaluation

- Whether aims and objectives which are based on the research problems are well formulated?
- Is the background of the research is described in sufficient detail to provide the rationale for the research?
- Is the literature critically reviewed taking into account concepts and the experimental studies?
- Whether methodology appropriately stated considering the aims, objectives, and research problems?
- > Are the results obtained well stated?
- > Are the research findings well discussed using the past related work?
- > Is it an original work of the student and what is the contribution to the area of research?
- Is scientific writing including the style of writing, presentation, and grammatical expression appropriate?
- > Is the study potential to be published in peer-reviewed journals or conferences?

4.2 Assessment Criteria for the Research Proposal Evaluation

The first evaluation of the research is proposal evaluation. Allocation of the marks for this section is 100%. The following are the criteria for the proposal evaluation. The student is required to orally present his research proposal to a panel of evaluators and obtain a pass grade for the proposal in order to continue the research.

Criteria	Allocation of Marks
Title (clarity and conciseness of the title)	10%
Introduction and Background	20%
<u> </u>	

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Research Objectives and Questions	10%
Literature Review	20%
Methodology*	20%
Significance/Implications	10%
Others (Overall Structure, Chapter Organization, References)	10%
Total	100%

4.3 Assessment Criteria for the Dissertation Evaluation

The dissertation evaluation is done at the final phase of the evaluation of the research. Allocation of the marks for this section is 100%. The following are the criteria for the dissertation evaluation.

Criteria	Allocation of Marks
Research Question : Assess whether the research question or problem is clearly stated and addresses an important issue within the field.	5%
Literature Review : Evaluate how well the literature review supports the need for the study and demonstrates an understanding of existing knowledge in the area.	10%
Methodology : Consider whether the chosen research methods are appropriate for addressing the research question and if they have been applied effectively.	10%
Data Analysis : Evaluate how well data has been collected, analysed, and interpreted; consider whether findings align with research objectives.	20%
Original Contribution : Assess whether new insights or perspectives have been added to existing knowledge in your given field through this dissertation.	20%
Clarity & Structure : Consider if ideas are presented logically with clear transitions between sections; assess overall clarity in writing style	10%
Conclusion : Evaluate how well conclusions align with findings; determine if conclusions answer initial questions or address initial hypotheses	10%
References & Citations : Check that all sources cited within the text are appropriately acknowledged in the bibliography/works cited section	5%
 Overall Presentation: Analyze how effectively arguments are presented Consider coherence between different sections Asses if formatting adheres to academic guidelines Look at use of language and technical writing skills 	5%
Significance: – Ultimately assess potential significance of dissertation on academic understanding within field	5%
Total	100%

4.4 Assessment Criteria for the Research Defending Oral Presentation

The final evaluation of the research is the oral presentation (viva). Allocation of the marks for this section is 100%. The following are the criteria for the oral presentation evaluation.

Criteria	Allocation of Marks
 Introduction Begin with a brief introduction to the topic and its significance. Use an attention-grabbing opening to engage the audience. 	10%
 Research Objectives Clearly state the specific objectives of your research. Explain how these objectives contribute to addressing the research problem. 	10%
Literature Review: – Provide a concise summary of relevant literature that informs your study. – Highlight gaps in existing research and explain how your study fills these gaps.	20%
 Methodology: Describe the research methods and data collection techniques you plan to use. Justify why these methods are appropriate for addressing your research questions. 	15%
 Significance/Implications: Discuss the potential contribution of your study to knowledge or practice. Consider explaining how the findings may have practical applications or impact policy decisions. 	15%
Visual Aids: – Use visual aids (e.g., slides, charts) effectively but sparingly—visuals should support, not replace, verbal communication.	5%
Time Management: – Practice delivering within the allocated time; ensure that you cover all key points without rushing or exceeding time limits.	5%
Audience Engagement: – Encourage audience interaction by inviting questions at appropriate junctures during the presentation	5%
Clarity & Confidence:	5%

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- Speak clearly and confidently; maintain eye contact with audience members when presenting	
Conclusion: – Summarize key findings, reiterate the significance of the proposed research – Invite any final questions from the audience	10%
Total	100%

4.5 Marks Allocation for the Final Dissertation

Proposal	20%
Dissertation Evaluation	60%
Dissertation Defense (viva)	<u>20%</u>
	100

4.6 Plagiarism in In-course Assessments

Submission of in-course assessment with unacknowledged content and materials copied from published or unpublished work of others or materials posted on websites is considered a serious offence. Such cases will be considered plagiarism and will be severely dealt with after an inquiry.

5. FORMATTING OF THE DISSERTATION

Your dissertation needs to be arranged in the following format.

The following components should be
included in a dissertation:
Cover Page
• Title Page
Declaration
Acknowledgements
Abstract
• Table of Contents

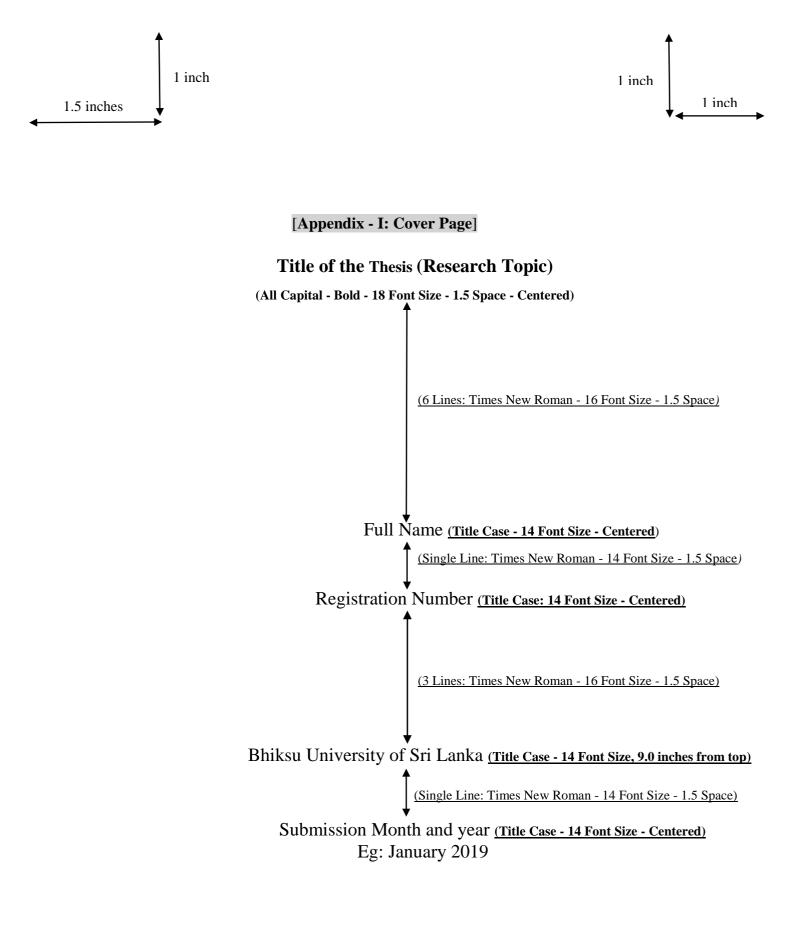
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	• List of Tables (if any)
	• List of Figures (if any)
	• List of Plates/Maps, etc. (if any)
	• List of Abbreviations (if any)
	• Chapter 1, 2
	• List of References/ Bibliography
	Appendices (if any
	• Appendices (if any)
	MS Word, Times New Roman, FMAbhaya.
Typesetting:	Iskole potha 12 size, double-space,
	justified, margins top bottom and right 1"
	and left and right 1.25".
	Chapters of the dissertation should be
Chapter number and title:	numbered consecutively using Arabic
	numerals and should have titles, for eg.
	Chapter 1 Introduction. Use a bold font with
	size 16.
	Headings and sub-headings of a chapter
Headings and subheadings:	should be numbered using Arabic numerals
	consecutively with not more than 4 digits to
	read chapter number, 93 section number,
	sub-section number, etc., for eg. 2.1, 3.1,
	2.1.3. use bold font with size 14. For eg.
	2.1.1, 2.2.1 use bold font with size 13.
Paragraphs:	Paragraphs should be separated from
	headings/ sub-headings by two carriage
	returns and should not be too lengthy
	paragraphs.
	Standard international units of
	Standard International units of

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	applicable, for eg. 25 kg, USD ten million, etc.
	All numbers under 10 should be spelt out in
Using anymphony in the taxt.	_
Using numbers in the text:	letters and all numbers of 10 or more should
	be rendered in digits. If a number is used at
	the beginning of a sentence, it should be
	spelt out in letters.
	Charts, diagrams, drawings and
Tables/ Figures /Charts:	photographic images, tables, etc. should be
	clear in quality numbered consecutively
	with Arabic numerals by chapter (for eg.
	first table in Chapter 2 should be given as
	Table 2.1, tenth figure in Chapter 3 should
	be given as Figure 3.10), and provided with
	a suitable title (on the top) and the source (at
	the bottom).
	All mathematical equations and formulae
Equations and Formulae:	should be clearly typed with symbols
	correctly aligned and adequately spaced.
	Equations should be numbered by chapters
	using Arabic numerals given in parenthesis,
	for eg. third equation in Chapter 3 should be
	given as Equation (3.3) on the same line
	after the equation /line below.
	Details of the abbreviations should be given
Abbreviations:	in the text when it appears first and the
	abbreviation used thereafter, for eg.
	Sustainable Development Goals (SDGs)
	Notes should be kept minimum and given as
Notes:	Notes should be kept minimum and given as Footnotes or Endnotes. The footnotes or
Notes:	

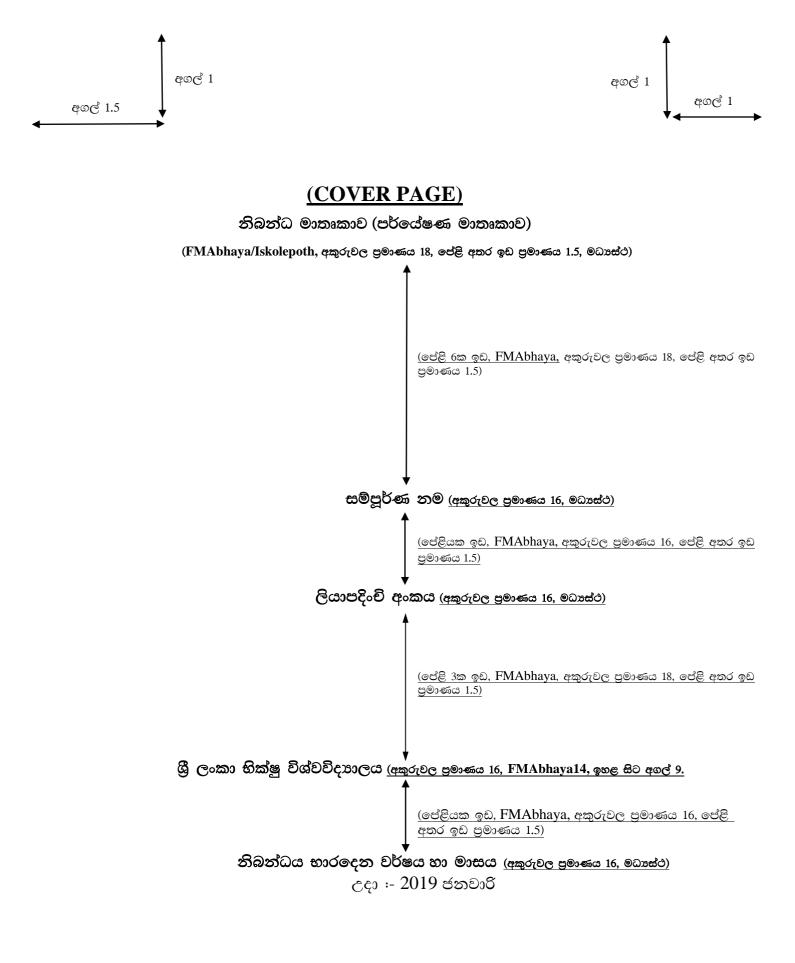
	on a matter. Use font size 11 for footnotes or
	endnotes,
	The preliminary pages (from title page to
Numbering of Pages:	abbreviations) should be numbered using
	lowercase Roman numerals given in
	parenthesis, for eg. (i) and placed at the
	midpoint of the bottom of the page. All
	pages of Chapter 1 to appendices of the
	dissertation should be numbered using
	Arabic numerals and placed at the midpoint
	of the bottom of the page.
Referencing style	Harvard/APA/Chicago referencing style
Cover page colour	Black



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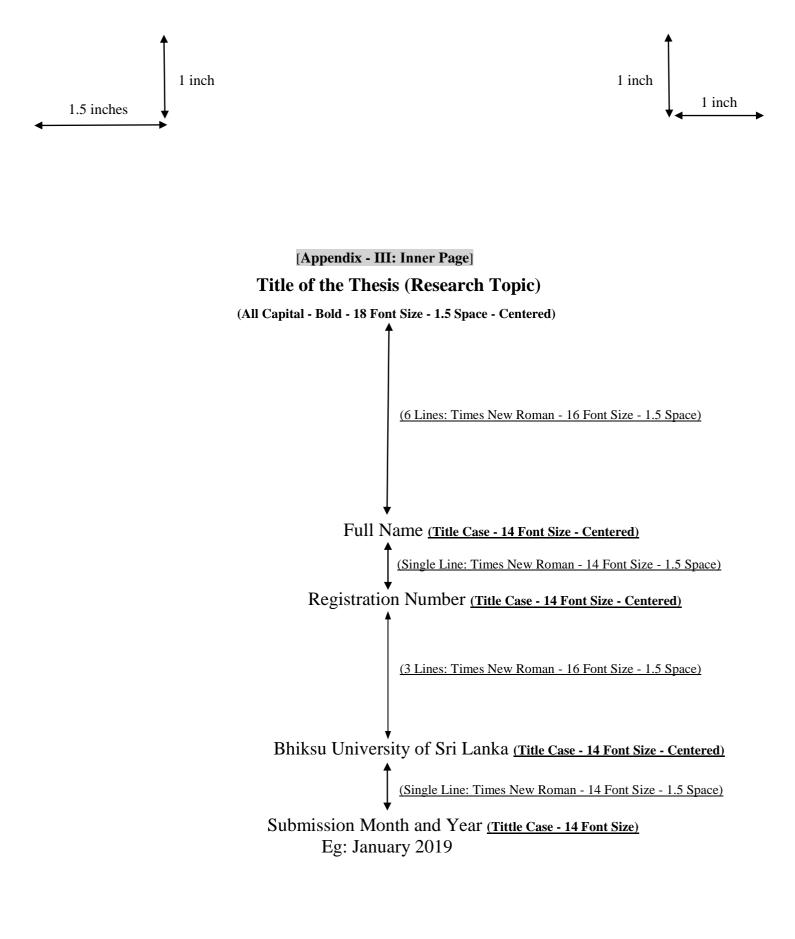


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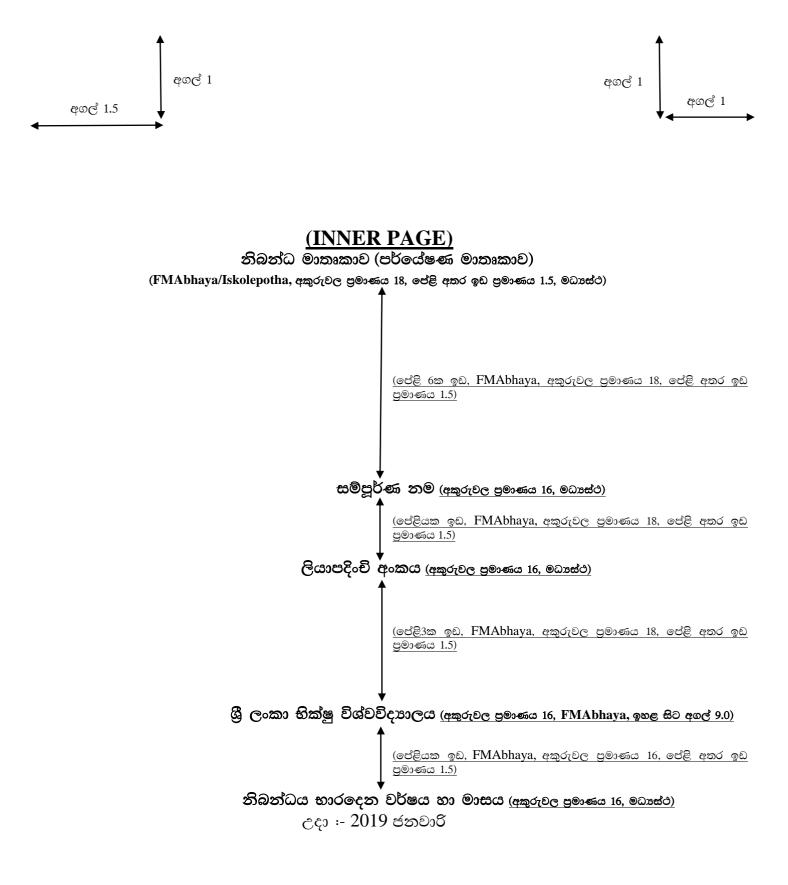
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