Procedural Guidelines for Master's Thesis



School of Science

Kathmandu University Dhulikhel, Kavre, NEPAL

Revised version: March 2018

CONTENTS	Page
1. Sequence of Items required in Master's thesis	3
2. Guidelines for layout and format of thesis	4
3. Sample title page	5
4. Dedication	6
5. Declaration (by the Student)	7
6. Certification (approval by the Supervisor and HOD)	8
7. Acknowledgements	9
8. Abstract (example)	10
9. Margins to be adhered to for all pages of thesis	11
10. Sample figure layout and captions	12
11. Sample table headings and layout	13
12. Sample reference listings	14
13. Procedures and guidelines for Viva-voce (oral presentation)	15
14. Requisite forms to be completed upon final evaluation	17

Sequence of Items Required in Master's Thesis

- A. Title page
- B. Dedication (optional)
- C. Declaration of authenticity by student
- D. Certification/thesis approval by the Supervisor & HOD
- E. Acknowledgement
- F. Abstract
- G. Table of Contents
- H. List of Figures
- I. List of Tables
- J. Introduction
- K. Review of Literature
- L. Materials & Methods
- M. Results and Discussion
- N. Summary and Conclusions
- O. References
- P. Appendices or Annexes

<u>NOTE</u>: There is no specific requirement for length of the thesis; however, a general guideline of between 50 and 100 pages (1.5 spacing) should be used. Only in exceptional cases should the upper limit of 100 pages be exceeded!

Guidelines for layout and format of thesis:

1.

2. 3.

- 1. Preliminary pages should be numbered: **i., ii., iii, iv, v, vi,** etc. A page number should not be shown on the title page even though it is counted as **i**.
- 2. Margins should be maintained on all pages as follows:

Left margin = 3 cm (wider for binding) Top margin = 2.5 cm Right & bottom margins = 2 cm

- 3. Page number should be placed at the **<u>bottom, center</u>** or **<u>bottom, right</u>** of page.
- 4. For labeling of Chapters and Sections follow the systematic order:

0 1	
Chapter 1	
1.1. Section 1	
1.1.1.	Sub-section 1
1.1.2.	Sub-section 2, etc.
1.2. Section 2	
1.3. Section 3, etc.	
Chapter 2	
Chapter 3, etc.	

- 5. Use 1.5 line spacing for all text in the main body of the thesis.
- 6. Use <u>Times New Roman</u> or Courier New fonts, **12 point** size, for text.
- 7. Label Appendices or Annexes as: A, B, C, etc.; and give name (title) to each.
- 8. Label figure captions at bottom of the figure and according to the Chapter it appears in such as, Figure 1.1, Figure 1.2, Figure 2.1, Figure 2.2, Figure 3.1, etc.
- 9. Label table headings at the top of the table and according to the chapter it appears in, similar to the figures, e.g., Table 1.1, Table 1.2, Table 2.2, etc.
- 10. Cite references in the text of the thesis according to the convention:
 "author's last name (date)" -- in case there is only one author
 "last name of first author" *and* "last name of second author" (date) -- in case of two authors
 "last name of first author" *et al.* (date) -- in case of multiple authors
- 11. List references alphabetically and using correct citations for books, journal articles and conference/seminar proceedings as shown in the examples (following pages).
- 12. If more than one reference of the same author exists then the references with the same author should be listed chronologically according to publishing date (year).
- 13. If more than one of the same author's publications exist in the same year (date), then use suffixes a, b, c, etc., after the publication year {e.g., 1998a; 1998b; etc.)

Sample Title Page

"TITLE OF THESIS"

A THESIS

SUBMITTED IN

PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR

THE MASTER'S DEGREE IN (programme name)

BY

Student's name



DEPARTMENT OF -----

SCHOOL OF SCIENCE

KATHMANDU UNIVERSITY

DHULIKHEL, NEPAL

"month and year of completion"

DEDICATION (optional)

(e.g., "Dedicated to my Parents")

DECLARATION

I, "*student's name*", hereby declare that the work contained herein is entirely my own, except where states otherwise by reference or acknowledgement, and has not been published or submitted elsewhere, in whole or in part, for the requirement for any other degree or professional qualification. Any literature, data or works done by others and cited within this thesis has been given due acknowledgement and listed in the reference section.

Signature

"Student's name"

Date:_____

CERTIFICATION

This thesis entitled "......" is carried out under my supervision for the specified entire period satisfactorily, and is hereby certified as original work done by "*student's name*" in partial fulfillment of the requirements for the Master's degree in "*programme name*", Kathmandu University, Dhulikhel, Nepal.

Supervisor
Date:
Name:
Department:
School of Science
Kathmandu University

APPROVED BY:

I hereby declare that the candidate qualifies to submit this work as Master's thesis to the Examination Committee.

Head of the Department

Date:

Department:

School of Science

Kathmandu University

ACKNOWLEDGEMENTS

{Example of Acknowledgements}

This study was carried under financial assistance of project funded by

I am extremely thankful to my supervisor (s) "name with title", Department of "name of Department", Kathmandu University, for their noble guidance, support with full encouragement and enthusiasm. I am grateful to "name with title", Head, Department of "name of Department", Kathmandu University, for his/her valuable suggestions, ever encouraging and motivating guidance.

Very special thanks to team mates (*name them individually*) who were always there with me during sampling in the field as well as sorting and identification of the samples in the lab. Their company in the field and laboratory will be always remembered. I would like to acknowledge (*name individual who have contributed significantly*) for providing me his/her valuable suggestion regarding data analysis.

I would also like to thank (*name individually*) for assisting me in (*state the task they supported*). Last but not the least I would also like to thank all of my friends, family members for encouraging and supporting me whenever I needed them.

ABSTRACT

{Concise abstract of the thesis – should not exceed 500 words}

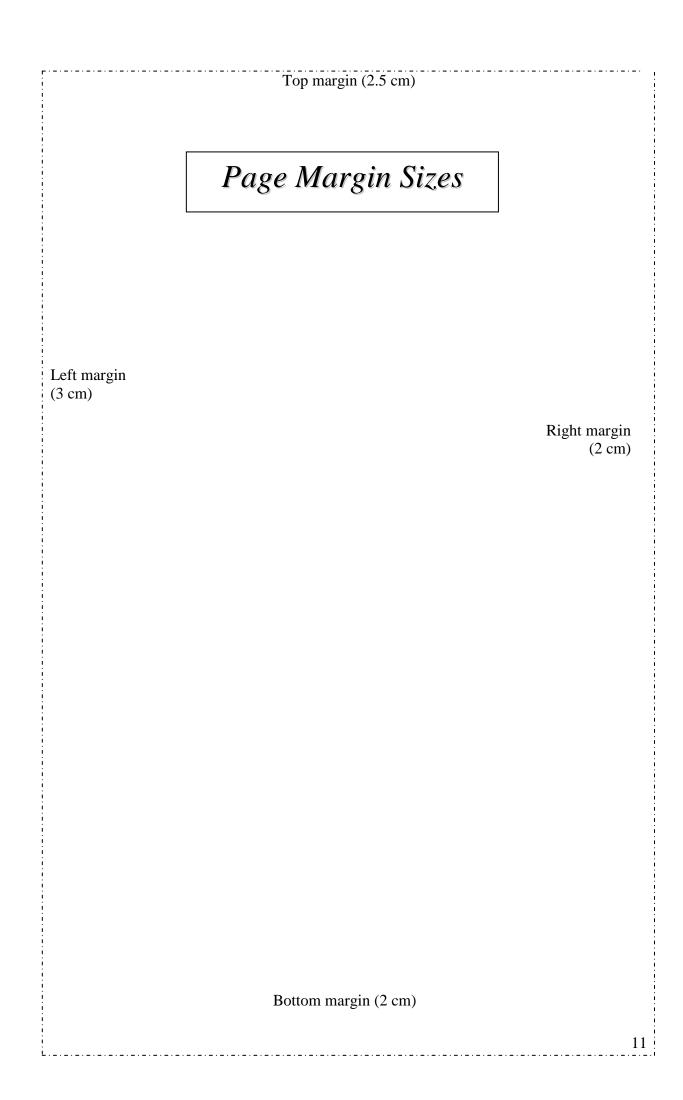
Example abstract

Bio-engineering is the use of living vegetation, either alone or in conjunction with civil engineering structures and non-living plant material, to reduce shallow-seated instability and erosion on slopes. The main objectives of this study were to stabilize Kathmandu University High School (KUHS) slope with the application of bio-engineering techniques and to measure the soil erosion pattern on the slope before and after the application of control measures.

A clear understanding of the causes and mechanism of failure is essential for the application of bioengineering control measures at different locations (spots) of a slope. Turfing, grass plantation, grass seeding, brush layering, live check-dams, retaining walls, check-dams, roof runoff drainage, and tree plantation were the main technologies used for the stabilization of the slope, while erosion pin method was used for soil loss monitoring.

The KUHS slope, which had become severely degraded and unstable during the rainy season of 2002 has now become much improved and substantially stabilized. The soil loss from the slope before treatment was observed to have decreased by almost 7 times after the application of control measures. Moreover, if the slope had been not controlled, the rate of soil loss would have likely increased by 1.5 times.

Bio-engineering is not only useful for limiting lateral extent of instability but also to improve surrounding biological environment by encouraging plants and animal inhabit the slope, and gradually enables a better soil to form. Lighter, smaller structures at the upper part of the slope and heavier vegetation towards the base, to strengthen the foundation, leads to highly effective overall slope stabilization. Unlike civil engineering structures which are of limited effective life, those of vegetative measures are unlimited and usually increase with time. Improper soil disposal during construction, overloading, and resultant slope failure can be avoided by employing numerous small bench or gently sloping terraces across-slope, during construction phase. Bio-engineering is an inexpensive, socially readily adopted, environmental friendly and most suitable technology for sustainable slope stabilization.



Sample Figure Layout and Captions

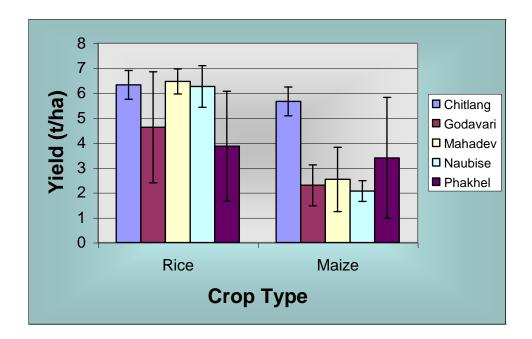


Figure 5.1. Mean maize and rice yields for five VDCs of the study area. Bars indicate standard deviations about the mean for each VDC.

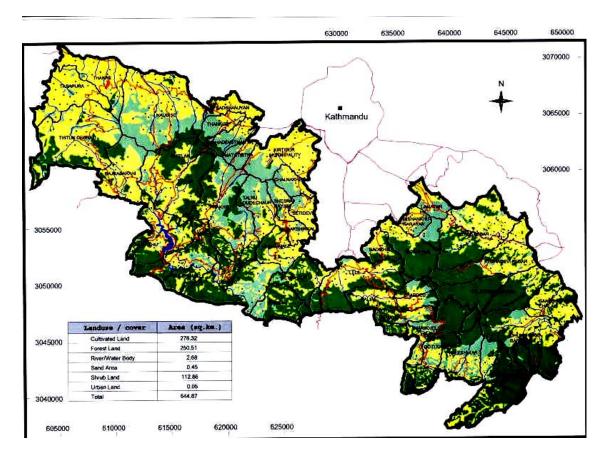


Figure 1.1. Map of the study area including parts of 5 districts and 9 Village Development Committees.

Sample Table Heading and Layout

Source	DF	DF Mean Squares	
Replication	2	0.94	0.92ns
Erosion Phase	3	15.34	15.00**
Error A	6	1.02	
Sampling Time	18	124.00	96.10***
Time X Rep	36	1.21	0.93ns
Phase X Time	54	19.00	14.71***
Error B	108	1.29	
Residual	119		
Total	227		

Table 4.3. Factorial analysis of variance of soil air carbon dioxide-C concentrations by erosion phase and season.

DF = degrees of freedom; ns = non-significant; **, and *** indicate significance at the 0.01 and 0.001 levels of probability for the ANOVA F-test.

Independent	Dependent variables (soil air CO ₂)				
variables	CO ₂ -SLI	CO ₂ -MOD	CO ₂ -SEV	CO ₂ -DEP	Mean
					CO_2
T-SLI	0.61**				
M-SLI	041ns				
T-MOD		0.50*			
M-MOD		0.29ns			
T-SEV			0.35ns		
M-SEV			0.25ns		
T-DEP				0.74**	
T-DEP				0.33ns	
Mean-T					0.61**
Mean-M					0.34ns
Mean C-Flux					0.65**

Table 4.4. Correlation matrix of soil air CO_2 concentrations with soil temperature, soil water content and carbon flux from the soil.

T = soil temperature, M = soil moisture, SLI = slightly eroded, MOD = moderately eroded, SEV = severely eroded, DEP = depositional phase, CO_2 denotes soil air carbon dioxide, C-flux denotes CO_2 -C flux from the soil surface.

*, ** indicate statistical significance at the 0.05 and 0.01 levels of probability, respectively; ns = non-significant for Pearson's correlation coefficients.

Sample Reference Listing

Anderson, J.P.E. (1982) Soil respiration. In: A.L. Page, R.H. Miller and D.R. Keeny (eds.) *Methods of Soil Analyses, Pt. 2. Chemical and Microbiological Properties, 2nd ed.* ASA Monograph No. 9. ASA-SSSA, Madison, WI, pp. 831-871.

Anderson, D.W. (1995) Decomposition of organic matter and carbon emissions from soils. In: R. Lal, J. Kimble, E. Levine, and B.A. Stewart (eds.) Soil Management and Greenhouse Effect. *Advances in Soil Science*. CRC Press, Inc. Boca Raton, FL, pp. 165-175.

Bouwman, A.F. (1990) Exchange of greenhouse gases between terrestrial ecosystems and the atmosphere. In: A.F. Bouwman (ed) *Soils and the Greenhouse Effect*. John Wiley Publ., Chichester, UK, 575pp.

Burton, D.L. and Beauchamp, E.G. (1994) Profile nitrous oxide and carbon dioxide concentrations in a soil subject to freezing. *Soil Sci. Soc. Am. J.*, **58**:115-122.

Buyanovsky, G.A. and Wagner, G.H. (1995) Soil respiration and carbon dynamics in parallel native and cultivated ecosystems. In: R. Lal, J. Kimble, E. Levine, and B.A. Stewart (eds.) Soils and Global Change. *Advances in Soil Science*. CRC Press, Inc. Boca Raton, FL, 209-217.

Chengere, A. and Lal, R. (1995) Soil degradation by erosion of a typic hapludal f in central ohio and its rehabilitation. *Land degradation and rehabilitation*, **6**:223-238.

Dudziak, A. and Halas, S. (1996) Diurnal cycle of carbon isotope ratio in soil CO₂ in various ecosystems. *Plant and Soil*, **183**:291-299.

Duxbury, J.M., Harper, L.A. and Mosier, A.R. (1993) Contributions of agroecosystems to global climate change. In: E. Rolston, L.A. Harper, A.R. Mosier and J.M. Duxbury (eds.) *Agricultural Ecosystems Effects on Trace Gases and Global Climate Change*. ASA Special Publ. No. 55. Madison, WI, pp.1-18.

Fahnestock, P., Lal, R. and Hall, G.F. (1995) Land use and erosional effects on two Ohio Alfisols: I. Soil properties. *J. Sustainable Agric*. **7**:63-84.

Gardner, W.H. (1986) Water Content. In: A. Klute (ed.), *Methods of Soil Analysis, Part 1: Phyical and Mineralogical Methods*. ASA Monograph No. 9, American Society of Agronomy, Maidson, WI, pp. 493-544.

Gomez, K.A. and Gomez, A.A. (1984) Statistical *Procedures for Agricultural Research 2nd Ed.* IRRI. John Wiley and Sons, Publ. New York, NY. 680pp.

Master's level - Procedures and guidelines for Viva-voce (oral presentation) Procedures and Criteria for Evaluation: Viva-Voce and Thesis

- 1. <u>Thesis Review Committee Members</u>
 - a. Head of the Department
 - b. External Examiner
 - c. Thesis Supervisor

-Chairperson -Member -Member

2. <u>Responsibility of Thesis Review Committee Members</u>

- a. Head of the Department
 - Receives final copy of thesis at least one week before viva-voce meeting
 - Reads and evaluates thesis prior to viva-voce meeting
 - Attends viva-voce and participates in questioning of the candidate
 - Evaluates candidate's performance at viva-voce and writing of the thesis
- b. Expert (External Examiner)
 - Is appointed at least one months prior to viva-voce
 - Receives final copy of thesis at least two weeks before viva-voce meeting
 - Reads and evaluates thesis prior to viva-voce meeting
 - Attends viva-voce and participates in questioning of the candidate
 - Evaluates candidate's performance at viva-voce and writing of the thesis
- c. Thesis Supervisor
 - Directs the work of the student from inception to completion of thesis
 - Serves as a member of the Thesis Review Committee
 - Takes responsibility for viva voce meeting

3. <u>Conduct of theViva-Voce</u>

- a. The viva-voce is held after the final thesis copy is available but not earlier than two weeks after thesis is delivered to Thesis Review Committee Members.
- b. The viva-voce is a public event and is therefore announced at least one week in advance. The viva-voce will include at least the following activities:
 - Student presentation of research project (25-30 minutes)
 - Questions about the research from the Thesis Review Committee members (15-20 minutes)
 - Dismissal of candidate (s) from meeting (to wait for decision)
 - Confidential discussion and evaluation of candidate by thesis review Committee members; decision regarding qualify of performance.
 - Head of the Department recalls candidate and announces decision.

4. <u>Criteria for Evaluation of Dissertation and Viva-voce</u>

- a. The following aspects should be considered when evaluating the quality of the <u>**Thesis**</u>:
 - 1. Clarity of purpose for the research
 - 2. Research procedures to the purpose for the research
 - 3. Analytical skills demonstrated:
 - a. selection of and implementation of research process
 - b. conclusions drawn from findings
 - c. recommendations presented
 - 4. Clarity in the writing style
 - 5. Presentation/format meets international standards for excellence
- b. the following aspects should be considered when evaluating the quality of the **Viva-voce presentation**
 - 1. Clarity of purpose for the research
 - 2. Summary of research procedures related to purpose (s) for the research
 - 3. Findings presented to emphasize highlights
 - 4. Summary of conclusions
 - 5. Recommendations
 - 6. Overall clarity in presentation style

KATHMANDU UNIVERSITY School of Science Evaluation Criteria: Written Thesis

Student's Name:_____

Thesis Title:_____

Criterion	Unsatisfactory	Satisfactory	Comment
1. Clarity of purpose(s) for the research			
2. Research procedures			
appropriate to purpose(s)			
purpose(s)			
3. Analytical skills			
demonstrated:			
a. research process			
b. conclusions drawn			
c. recommendations			
4. Clarity in writing style			
5. Presentation / format			
meets international			
standards for excellent			
6. Other (state criterion)			
7. Other (state criterion)			

Overall Opinion (encircle one):

Unsatisfactory

Satisfactory

Date

Signature:

External Examiner (Thesis Review Committee Member)

APPENDIX-3

KATHMANDU UNIVERSITY School of Science Evaluation Criteria: Viva - Voce

Student's Name:_____

Thesis Title:_____

Thesis Supervisor: _____

Criterion	Unsatisfactory	Satisfactory	Comment
1. Clarity of purpose(s) for the research			
2. Summary of research procedures related to purpose(s)			
3. Findings presented to emphasize highlights.			
4. Summary of conclusions			
5. Recommendations			
6. Clarity in style of presentation			
Other (state criterion)			

Overall Opinion (encircle one): Unsatisfactory

Satisfactory

Signature: Thesis Review Committee Members

Thesis Supervisor

Head of the Department (HOD)

External Examiner

KATHMANDU UNIVERSITY School of Science

Report of Viva-Voce

Student's Name:

Date:

Degree:

Thesis Title:

Report of Thesis Review Committee:

_____ Thesis is accepted
 _____ Thesis will be accepted, with minor changes made under the guidance of the Supervisor.
 _____ Thesis is not accepted; major changes are required, with final approval by the committee.

Members of the Thesis Review Committee (signatures);

Thesis Supervisor

HOD

External Examiner