

Guidelines on Writing a Research Proposal

- **‘Dissertation Proposal & Seminar’** is a **compulsory** paper of one credit in M.Sc 3rd semester with full marks 25 and pass marks 12.5. The research proposal written by students will be used for the dissertation work in the 4th semester.
- The students should develop the proposal for dissertation work under the guidance and consultation of supervisor of their department and if required joint supervisor (may be other than their department).
- The students will select topic for their research work related to their special/elective paper. The nature of project work can be field work, observational work and experimental work. Whatever the nature of the work, students should critically review literature of the area of interest, discuss with colleagues, academic supervisor(s) and other experts and identify the problem specifically. Extensive and relevant literature review should be done to meet the purpose of the project title, objectives and materials cum methods. Latest literature should be emphasized.
- The proposal must be submitted for the original research work. There must not be duplication or repetition of previous research work.
- Students should submit one copy of the proposal to the department within first three months of the 3rd semester or as time allocated by the concerned department head. The general format of the proposal should be in standard format given in this guideline.
- The department will call for open defense of the proposal. The proposal evaluation committee will include Head of the department/ Campus chief / appointed faculty members. If necessary, the student shall be asked to do further corrections and amendments before the approval of the proposal.

Format of Research Proposal

- **Language:** The research proposal must be written in **English language**. Spelling should be either US English or British English, but not mixed.
- **Proposal Length:** The proposal should not exceed 10 pages excluding the Title page and Appendices. Page no. 1 should have the precise proposal summary followed by introduction.
- **Paper:** The proposal must be printed on one side of the A4 size paper.
- **Pagination & margins:** Page number should be placed at the centre of the bottom of the pages. Each page must be kept within 1” margin or 2.5 cm at top, bottom, right and the left hand margin should be 1.25”.
- **Title page:** The title page must include the **proposal title**, name and **identity of the student** (roll no., batch, special paper); name, designation and organization of the **supervisor(s)** with the signature space; and name of the **submitted department (eg. Central Department of Zoology, Institute of Science & Technology, Tribhuvan University**. All the contents should be centered aligned. Title should be in upper case and bold print in Times New Roman 14 pt. font size and other matter in 12 pt font size.
- **Font size and spacing:** Standard font size for text should be set at 12 pt in Times New Roman. Line spacing of regular write up should be of 1.15 space (spacing before and after of 0 pt.)
- **Headings & sub-headings:** Headings should be all in upper case and sub-headings in lower case, be bold, left aligned in 14 pt and 12 pt respectively. The sub-headings can be numbered according to the heading number (eg. 1. INTRODUCTION; sub-headings: 1.1, 1.2, 1.3.....)

Project Title

- Title should be concise, specific, impressive and informative - short titles are preferred.
- Limit to one or two lines/generally not exceeding 20 words.
- Use scientific names of the organisms (if needed).

Summary

The summary should contain the essence of the whole proposal in about 250 words and should summarize the following: introduction, objectives, methods and expected outcomes.

Introduction

This section introduces the domain of the study and provides a general overview of the circumstances, issues, and background leading to the problem under investigation.

The introduction section should include:

- Background of the study
- Objectives
- Significance of the study/rationale/ justification
- Research questions & hypotheses (if necessary)

Background: This should explain the background against which the work is to be performed and set out the results of any previous studies related to the research to be undertaken. Any person who reads the brief background should be left with a clear understanding of how the new study follows on from the current state of knowledge and why it needs to be done. As many as important related references should be cited.

Objectives

What is the point of the study? Give the overall aim of the project in one sentence.

Then to achieve that aim give the specific objectives (generally three or four) which are the breakdowns of the general objective into smaller logically connected parts. In general, the more specifically the objectives are stated, the easier it will be to plan the study.

Use SMART guidelines to develop research objectives. *SMART* stands for:

Specific – avoid general statements; include detail about what you are going to do.

Measureable – there should be a definable outcome.

Achievable – be realistic in what you hope to cover, don't attempt too much. A less ambitious but completed objective is better than an over-ambitious one that you cannot possibly achieve.

Realistic – think about logistics. Are you practically able to do what you wish to do? Factors to consider include time, expense, skills, access to sensitive information, participant's consent, etc.

Time constrained – be aware of the time-frame of the project.

Significance of the study

Give the importance of the work. Discuss the pertinence of this work to scientific community. If possible, elaborate the worldwide applicability of the results. Provide a brief statement of the innovative aspects of the proposed research.

Research question(s) & hypothesis(es)

One can give research questions and or hypotheses depending on his/her research topics.

Literature Review

Extensive and relevant literature review should be done to meet the purpose of the project title, objectives and materials cum methods. The students must also review the M.Sc Zoology

dissertations submitted to T.U. Latest literature should be emphasized and put into most relevant issue based order.

Materials and Methods

This section describes in details how and where the research is to be carried out. Following points can be considered while designing the research methods:

- Describe the study area showing study sites in the map (if necessary).
- Mention briefly the materials used.
- Discuss experimental design.
- Give reasons for excluding subjects (if necessary).
- Follow standard methods and cite references of methods employed.
- Mention the institution(s) from where the facilities (eg. lab.etc) will be provided.
- Discuss research alternatives if your original assumptions/hypotheses prove incorrect
- Mention how the data will be statistically analyzed.

Ethical, Legal & Social Implications (ELSI)

Any research related to human, animals, plants or any form of bios or biomes should have pre-informed consent from the concerned authority if they are liable to ELSI.

Expected Outcomes

Possible outcomes of the proposed research should be postulated in this section. Expected outcomes include enhancement in academic knowledge in proposed area of the study, utility of the research and direct or indirect beneficiaries or innovations.

Time Frame of the Study

- Provide an estimated time schedule/working scheme of your work. Time schedule presentation can be given in a tabular form as shown below.
- Headings of the activities can be different depending upon the nature of the work.

S. N.	Headings	3 rd Semester			4 th Semester					
		1 st month	2 nd month	3 rd month	1 st month	2 nd month	3 rd month	4 th month	5 th month	6 th month
1	Literature review									
2.	Conceptual frame work									
3.	Experimental design /Research design									
4	Field survey/data collection									
5	Lab. work									
6	Data analysis and interpretation									
7	Submission of thesis/dissertation									

Budgeting (if necessary)

The budget should include overall expenses incurred in the proposed research specially, the expenses of consumables and laboratory supplies. Budget can be mentioned under multiple headings depending upon the nature of proposed study. However every items and amounts allocated in the budget should be justified.

References

All literatures cited for proposal writing should be listed in an alphabetical order in a standard format given below.

Appendices (if necessary)

An appendix should include materials that supplement the main text of the dissertation. This section can consists of questionnaires, maps, sketches, photographs, description of equipment, consent form (if necessary) etc. Number the appendices alphabetically (Appendix A, Appendix B, etc.).

General format for the references:

- (i) **Journal article, single author**
Spackman, E. 2012. Viral diagnostics: will new technology save the day? *Avian Pathology*, **41**(3): 251-8.
- (ii) **Journal article, two authors**
Ladhani, S. and Williams, H.C. 1998. The management of established postherpetic neuralgia: a comparison of the quality and content of traditional vs. systematic reviews. *British Journal of Dermatology*, **139**(1): 66-72.
- (iii) **Journal article, more than two authors**
Siliwal, M., Molur, S. and Raven, R. 2010. Transfer of two Indian *Idiops* spp. to the genus *Heligmomerus* Simon, 1892 (Araneas: Idopidae) with redescription of *H. barkudensis* (Gravely, 1921). *Journal of Threatened Taxa*, **2**(1-2): 940-947.
- (iv) **Journal article, more than six authors**
If there are more than 6 authors, then include names of the six, followed by et al.
- (v) **Proceedings**
Joshi, D.D., Maharjan, M., Sharma, M. 2003. Status of laboratory animals welfare used for experimental research in Nepal. In: Joshi, D.D., Maharjan, M., Sharma, M. eds. Proceedings of national seminar on 'Wildlife in captive and status of wildlife conservation in Nepal', 16 March 2003, Kathmandu, Nepal. NZFHRC: 50-59.

- (vi) **Report**
Sharma, A.P. 1993. Status of water pollution in Nepal. A report submitted to Man and Biosphere (MAB), Kathmandu, Nepal.
- WHO. 1998. Guidelines for drinking water quality, Vol. 1, World Health Organization, Geneva.
- (vii) **Book**
Schuh, R.T. and Brower, A.V.Z. 2009. Biological systematic: Principles and application 2nd ed. Cornell University Press, Ithaca, 311 pp.
- (viii) **Chapter in edited book**
Nesheim, M.C. 1989. Ascariasis and human nutrition. *In* Ascariasis and its prevention and control, Crompton, D.W.T., Nesbemi, M.C. and Pawlowski, Z.S. (eds.). Taylor and Francis, London, U.K., pp. 87–100.
- (ix) **Dissertation/Thesis**
Bam, A.B. 2005. Screening of tomato germplasm to the *Meloidogyne*: a root-knot nematode. M.Sc. Thesis. Central Department of Zoology, Tribhuvan University, Kathmandu, Nepal.
- (x) **Website**
USGS. 2015. Freshwater mussels of the upper Mississippi river system. http://www.fws.gov/midwest/mussel/current_threats.html. accessed on 19 June, 2015.
