

List of Academic Disciplines Offering Master's Programs at
the Institute of Science & Technology, Tribhuvan University

SN	Discipline
1	Biodiversity and Environmental Management
2	Biotechnology
3	Botany
4	Chemistry
5	Computer Science and Information Technology
6	Data Science
7	Engineering Geology
8	Environmental Health in Disaster
9	Environmental Science
10	Food Technology
11	Geology
12	Hydrology and Meteorology
13	Information Technology
14	Mathematics
15	Microbiology
16	Mountain and Mountaineering Science
17	Physics
18	Statistics
19	Zoology

RESEARCH REGULATION



Master's Program

Tribhuvan University

**Institute of Science and Technology
(IoST)**

Dean's Office, Kirtipur, Kathmandu, Nepal

November 2025



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November 2025

Abbreviations

APA	American Psychological Association
AD	Anno Domini
BS	Bikram Sambat
CDRC	Central Department Research Committee
CD	Compact Disk
cm	Centimeter
Exp	Exponent
ERC	Ethical Review Committee
GPA	Grade Point Average
IoST	Institute of Science and Technology
mg	Milligram
SE	Standard Error
SEM	Scanning Electron Microscope
TU	Tribhuvan University
UGC	University Grants Commission
USB	Universal Serial Bus

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Tribhuvan University
Institute of Science and Technology
Dean's Office, Kirtipur

Research Regulation of Master's Program
2082

Tribhuvan University, Institute of Science and Technology (IoST) offers 19 Master's degree programs on various science and technology-related academic disciplines. These programs are aimed to produce qualified graduates with academic excellence and strong research capabilities. Students conduct researches during their study period to enhance research skills and are required to write thesis as a partial fulfillment for the completion of Master's degree in their respective subjects (mandatory or optional depending upon subjects), as research is a vital component of all these programs. Students are expected to achieve a high standard of academic excellence and contribute significantly to their fields of study through theoretical or applied researches. Therefore, the Master's Program Research Regulation has been drafted to fulfill the objective of promoting quality research in a standardized manner while maintaining uniformity among research guidelines across different subjects in science and technology.

Master's level research should be conducted in accordance with the following rules and regulations.

1.

Background

Research in the form of a thesis is an essential component of graduate education. Master's research allows students to design and execute experiments, collect and analyze data, interpret findings, and compile their findings into a thesis. A thesis represents a student's original research,

Master's Program

conducted under the supervision of faculty members, and serves as the culminating achievement of graduate studies. The objectives of the research work resulting in a thesis are:

- To enhance knowledge and skills necessary to conduct research on fundamental and applied aspects of the concerned subject.
- To equip students with analytical and argumentative skills while enhancing their ability to present research findings effectively.

Master's degree thesis should reflect the outcomes of guided research, ideally contributing new knowledge to the field and incorporating materials suitable for publication. Students are expected to engage with theoretical, computational, and experimental techniques and can be beyond standard textbook methods. They should demonstrate their ability to conduct investigations that abstract underlying principles for predictive applications, interpret research results logically, and communicate their findings clearly in writing.

These guidelines have been prepared to ensure that all the theses under the IoST adhere to standardized formats and maintain uniformity. It aligns with contemporary international norms in scientific research, outlining procedures to be followed before and during the research process, including fieldwork, laboratory experimentation, thesis writing, submission, and evaluation.

2.

Implementation of Thesis Guidelines

The Central Departments (through CDRCs¹) and Campuses (through concerned department / or specified research committee constituted by the campus) are responsible for implementing these guidelines. The Dean's office, IoST will monitor the implementation of these guidelines and reserves the right to explain, extend and amend the guidelines as and when

¹ Central Department Research Committees

required. These Guidelines will be effective immediately (from the date approved by the Faculty Board).

2.1 Eligibility for students

For subjects that do not have the provision of a mandatory thesis in the curriculum, students must meet the following criteria to qualify for thesis work.

- 2.1.1 Students must have attended the semester courses preceding the commencement of thesis work (as specified in the curriculum), offered to their Master's class as regular students.

2.2 Minimum requirements of the thesis

- 2.2.1 The copyright for the Master's degree thesis is held by Tribhuvan University.
- 2.2.2 The thesis must demonstrate a distinct contribution to the body of knowledge in the subject area and provide clear evidence of originality. It should meet a satisfactory academic standard and be suitable for publication as a thesis of Tribhuvan University.
- 2.2.3 The thesis must present the student's own original research. A student is not permitted to submit a thesis that consists entirely of work for which a degree has already been awarded to him or her by this or any other university.
- 2.2.4 The research proposal and thesis must be submitted in a form as prescribed in this guideline.
- 2.2.5 It is the student's responsibility to prepare and assemble all materials for the thesis and to present it in a correct order.
- 2.2.6 Students should pay close attention to ensure that the text and all accompanying illustrative materials are clear, accurate, and error-free. The format and technical specifications must conform to the guidelines provided in this document.

3.

Procedure

3.1 Inception of the thesis proposal

As notified by the concerned Central Department / Department / Committee, or as specified in the curriculum, students are required to submit a research concept outline in their proposed area of thesis within the specified deadline, in accordance with the Master's degree curriculum and relevant to their field of study. Where applicable, ethical clearance from the relevant authority must be obtained and documented.

4.

Qualification and Appointment of the Supervisor

4.1 Supervisor's qualification

The Supervisor's qualification will be decided by the concerned Central Departments / Department / Committee.

4.2 Co-supervisor's qualification

The Co-supervisors qualification will also decide by the concerned Central Department / Department / Committee.

4.3 Appointment of the supervisor

The concerned Central Department / Department / Committee will assign the supervisor. Co-supervisors can also be assigned to conduct the intended research work, if necessary. In the case of mandatory thesis work, the Head/Coordinator of the concerned departments may allocate supervisor / co-supervisor or as practiced by the department. The selection of the supervisor and co-supervisor (if required) shall generally be based on their expertise relevant to the intended thesis research.

4.4 Proposal writing and submission

Following the official notice, the student shall prepare the thesis research proposal under the guidance of the supervisor and in consultation with co-supervisor(s), if any. The proposal must be written

in the standard format prescribed in this guideline. The Central Department / Department / Committee will organize an open defense of the thesis research proposals or as specified in the curriculum.

The Central Department / Department / Committee may invite subject-related faculty members and external experts from the relevant field, if necessary. The committee will approve the proposal with any required revisions. If specified in the curriculum, the student shall defend the proposal accordingly.

The student must work as per the approved proposal and follow the instructions of the Central Department / Department / Committee. The supervisor and co-supervisor(s) (if assigned for the research) will guide the student at each stage of the work and, in coordination with the Central Department / Department / Committee, assist in facilitating access to necessary facilities. However, the primary responsibility for securing equipment and other required resources lies with the student. This aspect should be carefully considered while developing the research proposal.

4.5 Change of proposal

Under special circumstances, the Central Department / Department / Committee may recommend amendments or revisions to the approved proposal. In the event of any disputes or difficulties related to the thesis research, the Central Department / Department / Committee shall make the final decision in consultation with the supervisor, which may include approving or amending the existing proposal or requiring the student to develop a new proposal (must be justifiable). The student must carry out the research in accordance with the approved or amended proposal and follow the instructions of the respective Department.

4.6 Change of Supervisor (Co-supervisor)

The Central Department / Department / Committee may consider and approve the change of supervisor or co-supervisor under following circumstances:

- 4.6.1 If a candidate submits a request to the Central Department / Department / Committee for a change of supervisor or co-supervisor, providing valid reasons and proper justification.
- 4.6.2 If the Supervisor or Co-supervisor informs the Head / Coordinator in writing that he is unable to carry out his assigned duties due to transfer, health issues, or any other reasonable cause.

5.

Ethical Considerations

Students must adhere to all ethical standards and guidelines relevant to their research work. Students are required to obtain permission letters and ethical approval letters from the concerned authorities before commencing fieldwork, collecting voucher specimens, or gathering any other materials. Students working with individuals or communities, as per the nature of research, must secure legitimate permissions from them for interaction and photographs. Every student must obtain ethical approval for the thesis proposal involving human and animal subjects from the Ethical Review Committee (ERC) of the IoST or relevant ethical committees, as required. Those conducting laboratory work must adhere strictly to standard safety protocols and will be held accountable for any mishandling of materials that results in damage to equipment, glassware, or other resources. Students are required to conduct all research activities in compliance with the TU regulations and the existing laws and rules/regulations of the country. The CDRC / Department / Committee will not be responsible for any consequences in failing to do so by the candidate. The permission letters must be included in the thesis, and voucher specimens must be submitted to relevant institutions. Students are encouraged to complete their thesis work in the stipulated time.

6. **Progress Report**

The students are required to submit a progress report of the thesis to the CDRC / Department / Committee through his / her supervisor every three months, or as specified by the concerned department. The CDRC / Department / Committee may organize a seminar to review and evaluate proposals for improvement, or as stipulated in the curriculum.

7. **Plagiarism Clearance Certificate**

The student should obtain a plagiarism clearance certificate before submitting the thesis as per TU regulations.

8. **Thesis Submission**

The thesis shall be accepted upon the recommendation of the student's supervisor including co-supervisor(s) (if assigned for the research) within 2 months from the date of publication of result of final semester followed by an interval of every three-month in an academic calendar year. The exact dates for submission will be announced by the Department. The thesis must be accompanied by a plagiarism report as mandated by the IoST. The student must submit at least three copies loose-bound / spiral-bound, well-prepared and duly signed thesis to the Central Department / Department / Committee for approval.

A manuscript based on the research work may be submitted along with the thesis. If the manuscript has already been submitted to or published in a journal, the student must provide evidence of submission, acceptance, or publication to the concerned Department / Committee.

8.1 Evaluation and viva-voce examination

- The department shall forward the thesis to an internal examiner, designated by the CDRC / Department / Committee, and to an external examiner, appointed by the Dean's Office, IoST.
- The internal examiner shall be a faculty member of the department and has not been directly involved in the student's thesis work.
- The external examiner shall be an expert who shall not be affiliated as a faculty member of the department. He / She must have a Master's Degree in the relevant field of the student's research work. The Head / Coordinator may consult the supervisor and submit a list of three potential external examiners to the Dean's Office, IoST for final appointment.
- The Dean's Office, IoST, shall appoint an external examiner and notify the department. The external examiner shall be selected from the list of three possible external examiners recommended by the Department. The department will announce the schedule for the examination and viva-voce open defense.

8.2 Thesis evaluation

8.2.1 **Evaluation committee:** The thesis will be evaluated at the open defense by a four-member evaluation board / committee, which will be chaired by the Head (in case of Central Departments) and Program Coordinator (in case of campuses) as follows:

- | | |
|-----------------------------|-------------|
| a) Head/Program Coordinator | Chairperson |
| b) External Examiner | Member |
| c) Internal Examiner | Member |
| d) Supervisor | Member |

8.2.2 The evaluation form will be used which is either provided by the Dean's office or as specified in the curriculum of the respective subject.

8.2.3 Responsibilities of members of evaluation committee

The responsibilities of the evaluation committee members will be as follows:

8.2.3.1 **Supervisor:** Before submission, the supervisor must thoroughly review the thesis, including its content, formatting, and technical language. The supervisor is also responsible for critically assessing the originality of the work.

8.2.3.2 **Head / Coordinator:** The Head will review the thesis's format, including adherence to the prescribed reference style. If the format and content are found satisfactory, the Head will appoint an internal examiner in consultation with the supervisor to evaluate the thesis. The Head may also consult the supervisor to obtain three recommended names for the external examiner and forward them to the Dean's Office for final appointment. Additionally, the Head will coordinate with the internal examiner, supervisor, and external examiner to schedule the viva-voce examination. In the absence of the Head, a designated faculty member of the department may assume the Head's responsibilities during the viva-voce examination.

Note: In the TU constituent campuses, this responsibility will be carried by the Coordinator / Director of the program. In the absence of a coordinator / director, this responsibility will go to the chairman of the concerned department.

8.2.3.3 **Internal examiner:** The internal examiner is responsible for thoroughly reviewing the content of the submitted thesis. Additionally, the internal examiner must evaluate the originality of the thesis and assess it for any instances of falsification, fabrication, or plagiarism. If the internal examiner determines that the thesis does not meet the academic standards expected at the Master's level, or if significant duplication from other theses or published works is detected, the thesis may be returned to the student with comments for further revision and resubmission. In all cases, the internal examiner is required to submit a written evaluation to the evaluation committee following the viva-voce examination.

8.2.3.4 **External examiner:** The external examiner shall critically evaluate the thesis and prepare a set of questions for the student, aimed at thoroughly assessing the depth of knowledge, analytical skills, and understanding of the research work. These questions should be discussed in detail during the viva-voce to ensure a comprehensive evaluation. The external examiner is also responsible for identifying and addressing any technical errors in the thesis. The viva-voce examination shall not be conducted in the absence of the external examiner.

8.3 Final submission

8.3.1 **Corrections and incorporation of comments:** All suggestions and corrections provided during the viva-voce examination must be addressed by the student in accordance with the instructions given by the examiners. Student must consult the supervisor to address the comments and suggestions of the examiner. The final marks will not be forwarded to the Dean's Office until the corrected copies of the thesis are submitted and approved.

8.3.2 **Final submission:** The final hard-bound copy of the thesis must be submitted within one month of the viva-voce examination. The student is required to submit required number of hard copies along with a soft copy in PDF format, saved on a CD or USB drive (pen drive). Additionally, data obtained during the research must be submitted on a CD or USB drive. Evaluation marks will be forwarded to the Examination Section of the Dean's Office, IoST, only after the final submission and approval of the thesis.

9. **Thesis Research Proposal**

9.1 **General guidelines:** The thesis proposal should be written in a standard format as prescribed in this guideline.

9.1.1 Students must write their research proposals in English in their own

words, ensuring originality and avoiding any form of plagiarism.

- 9.1.2 The proposal must represent original work and should not duplicate any previously published or submitted research.
- 9.1.3 The body of the thesis research proposal, in general should not exceed 10 pages (excluding the title page, summary of research and appendix). However, the page restriction is not compulsory.

9.2 **Technical guidelines:**

Paper: A4 size white bond paper

Font: Times New Roman

Font size and style:

Body text: 12 point, regular, sentence case

Main Headings: 14 point, **bold**, Capitalize each word

Sub-headings: 12 point, **bold**, Capitalize each word

Scientific names and terms in different language: 12 point, *italic*

Line spacing: 1.5 line spaces

Text alignment: Justified from both sides

Margins: Top, right hand, and bottom margins: 1 inch

Left hand margin: 1.5 inch

Page number: Centered at the bottom of the page at least 0.5 inch from the lower edge of the page.

- 9.3 **Proposal format:** The format of the thesis research proposal should be as follows:

- 9.3.1 **Title page:** The title page of the thesis proposal must include the following information:

- (i) Title (clear and concise, generally containing up to 20 words as far as possible).
- (ii) A text with the following line “A thesis proposal submitted to the Central Department of / Department of, Campus name, Tribhuvan University.
- (iii) Name of student
- (iv) Exam roll number and batch

(v) Place of submission

(vi) Date of submission

9.3.2 **Introduction:** This section provides an overview of the proposed research and should span 2–3 pages. It must include the following components.

Background: Present a general overview of the research topic, supported by relevant background information from existing literature.

Objectives: Provide one general objective that aligns with the research title, followed by a set of specific objectives that support and elaborate on the general aim.

Rationale: Justify the need for the proposed research by clearly stating the research problem and its significance.

Hypothesis/ research questions (if applicable): Clearly state the hypothesis or research questions that your study aims to test or explore.

Limitations: Mention any known or anticipated limitations or constraints that may affect the outcomes of the research.

Literature review: This section should present a brief, specific, and critical review of recent and relevant literature closely related to the research theme of the thesis. The student must thoroughly examine current journal articles, books, theses, and other credible sources such as conference proceedings. Full-length original research articles from the study area, if available, should be comprehensively reviewed. Prior thesis works conducted by former students should also be critically analyzed to identify gaps and ensure novelty in the proposed study. Each statement must be properly cited using the standard referencing format, clearly establishing the relevance of the reviewed literature to the proposed research.

Materials & methods / Methodology: This section should clearly outline the procedures of the study, including the type and duration of both field and laboratory work. The overall study design, setting, and duration should be presented in a concise, journal article writing style without subheadings. However, specific components such as sampling methods, experimental or laboratory techniques, and data collection approaches should be detailed under appropriate subheadings as needed. These may include field mapping, sample collection, transportation, preservation, laboratory analysis, and/or secondary data collection and analysis. All experimental procedures must be described thoroughly to align with and fulfill the study objectives. A research flow diagram can also be included to provide a clear overview of the research process. If previously reported methods are to be used for the experimental work, reference should be given as mentioned in reference section of this document. A separate list of the instruments and chemicals is not required in this section, but can be listed in the appendix. Statistical analysis methods shall not be described in detail. However, if required, the statistical tools and techniques used for data analysis or verification shall be mentioned briefly. All ethical considerations should be described in detail here.

Expected outcomes: This section should outline the anticipated outcomes, such as academic contributions (such as reports, publications), practical applications, potential beneficiaries, or significant discoveries related to the research topic.

Work plan of the study: The proposed time frame and activities of the study should be presented in this section. The time frame may vary according to the topic of the proposed research. A Gantt chart for the proposed time frame and activities of the study should be presented here.

Budgeting (if applicable): The budget should detail the estimated expenses for the proposed research, including consumables and

laboratory supplies. It may be organized under relevant headings based on the study's nature, with clear justification for each item and amount listed.

References: All studies cited for proposal writing should be listed in a standard format (as mentioned in the reference section). Only the references cited in the text should be included in the list of references.

Appendices (if necessary): Any relevant information that is not accommodated in the main text section is provided in the Appendices. Students should consider the use of Appendices to present such items as instructions, consent forms, tables, figures and lengthy descriptions.

10.

Thesis Format

In order to maintain the uniformity of the M. Sc. thesis carried out in different departments under the IoST, Tribhuvan University, the following guidelines have been formulated.

10.1 Front matter

The front matter should be strictly maintained as follows:

- i. Cover Page
- ii. Blank Page
- iii. Inner Cover Page
- iv. Declaration
- v. Recommendation
- vi. Letter of Approval
- vii. Acknowledgements
- viii. Abstract
- ix. शोधसार (in Nepali language)
- x. List of Abbreviations and Acronyms
- xi. List of Symbols (if any)

- xii. List of Tables
- xiii. List of Figures
- xiv. Table of Contents

10.2 Main contents of the thesis

The main section of a thesis must contain the following minimum components. This can be elaborated or grouped differently depending on the nature of the research work of the respective subjects.

Chapter 1: Introduction or background or any terminologies that introduce the research work

Chapter 2: Literature review or theory related matter or as needed

Chapter 3: Materials and Methods or Methods or Research Methodology

Chapter 4: Results

Chapter 5: Discussion

Chapter 6: Summary

Chapter 7: Conclusions and Recommendations / Future Prospects

References

Appendix

Note: Master's thesis for some of the departments such as Statistics, Mathematics, Data Science, Computer Science, Information technology, Physics, Chemistry, etc. may not fit into the above-mentioned patterns (Introduction, Review of Literature, Materials and Methods, Results, Discussion, Conclusion and Recommendation for Further Work). In such situations, the body part of the thesis should be organized as follows.

1. Introduction
2. Chapters with the specific heading covering the research work done by the student.
3. Material and Methods or Methods or Research Methodology

4. Results and Discussion (or as needed)
 5. Conclusions and Recommendations (*This includes the overall conclusions and the recommendation for further work if applicable*).
- References
Appendix

Hence, a Master's level student may follow either one of these two formats, whichever suits based on the nature of the subject.

10.3 Language

- a) English language following either US English or British English, but a mix of both will not be accepted.
- b) The writing should be simple and easy to understand. The style of writing itself should be relatively formal – the use of slang and informal contractions should be avoided. Scientific writing has traditionally been written in a passive voice. The pronouns 'I', 'We' and 'They' should typically not be used.
- c) Presentation of thesis in Viva-Voce examination should be conducted in English medium.

10.4 Pagination

- a) Every page in the thesis has a number and the page numbers should be centered at the bottom of the page at least 0.5 inch from the lower edge of each page.
- b) Page numbers should not be placed in brackets, hyphenated or accompanied by other decorative items. The font size should be 10 point Times New Roman.
- c) For the Front Matters pages (preceding Chapter 1), use small Roman numerals (i, ii, iii, iv, v ...).
- d) The title page should not be numbered, although it is counted as page i; page number should not be printed on the inner cover page.

- d) For the text, use Arabic Hindu numbers (1, 2, 3, 4, 5 ...) starting with page one (the first page of Chapter 1).

10.5 Page setup and layout

Length: Generally, 50 to 100 pages (except for special cases), excluding preliminary pages and appendices.

Printing and Binding:

- a) First copies of thesis, submitted for viva-voce examination: Spiral binding or other loose binding with plastic sheets as front and back cover.
- b) Good quality printing on single side of A4 size (210 mm × 297 mm) white bond paper. All copies must be original print; photocopies will not be accepted.
- c) Final copies of thesis:
 - i. A good quality of hard binding (in black color and printed with golden ink) in standard format.
 - ii. The following information must be printed on the spine of the binding: Author's name, Title (a shortened version if necessary to fit in the space), and Year.

10.6 Typeface, font size and style:

Font: Times New Roman throughout the text. Should not be scripted or *italicized* except for scientific names and conventionally used for scientific terms and terms in different languages.

Font size and style:

- a) **Body text** : 12 point, regular, sentence case
- b) **Main Headings**: 14 point, **bold**, Capitalize each word
- c) **Sub-headings**: 12 point, **bold**, Capitalize each word

Line spacing: 1.5 line spaces

- a) Throughout the body of the text: 1.5 spacing.
- b) Single spacing may be used when necessary to allow the contents to fit in a single page in the following cases: Front

Matter, large Figures, lengthy tables, explanatory footnotes, References (except between entries), and Appendices.

- c) A new paragraph should be at least two lines at the bottom of the page. Otherwise, a new paragraph should start on a new page.

Text alignment: Justified from both sides

Margins:

- a) Top, right hand, and bottom margins: 1 inch
- b) Left hand margin: 1.5 inch

10.7 Tables, Figures and Photo plates:

- a) Should appear in the text closely following the point where it is first discussed.
- b) The table number and the caption should be placed above the body of the table and be centered.
- c) The figure number/ photo plate number and the caption should be placed below the figure/photo plate and be centered.
- d) All Tables, Figures and Photo plates throughout the thesis should be numbered sequentially (as Table 1, Table 2, ..., Figure 1, Figure 2, ..., Photo plate 1, ...).
- e) Table, Figure and Photo plate captions should be focused, descriptive and short.
- f) When necessary, a smaller font may be used to allow the entire table to fit on one page.
- g) When placing a Table or Figure horizontally (landscaped), they must face the reader when turned to 90 degrees to the right or clockwise (i.e., when in standard reading orientation, the top of the table should be on the left side of the page). Page number must remain in the same position as the pages of regular text, i.e., at the bottom of the un-rotated page.

Examples:

Table 4. Relative volume (%) of intercellular spaces (palisade and spongy parenchyma) and specific leaf mass (\pm SE, $n = 15$)

Species	Intercellular space		SLM (mg cm^{-2})
	Palisade parenchyma	Spongy parenchyma	
<i>Arbutus unedo</i>	11.1 ± 1.0	37.5 ± 0.7	10.32 ± 0.02
<i>Quercus coccifera</i>	10.9 ± 0.8	26.9 ± 1.9	15.57 ± 0.08
<i>Pistacia lentiscus</i>	12.4 ± 0.8	32.5 ± 0.9	13.63 ± 0.03
<i>Myrtus communis</i>	9.2 ± 1.4	36.0 ± 0.6	7.67 ± 0.01
<i>Lavandula stoechas</i>	17.5 ± 1.1	37.6 ± 1.8	11.53 ± 0.00
<i>Cistus incanus</i>	26.0 ± 2.1	33.5 ± 2.0	13.32 ± 0.15
<i>Calamintha nepeta</i>	14.8 ± 1.1	27.4 ± 1.6	9.21 ± 0.00
<i>Melissa officinalis</i>	15.6 ± 2.1	28.8 ± 2.1	6.11 ± 0.05

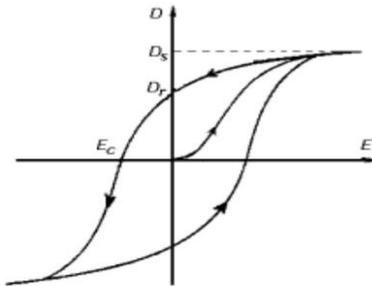
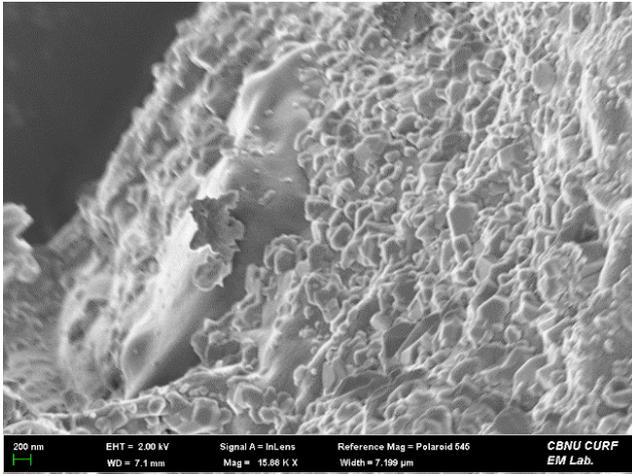


Figure 3: The hysteresis loop of a ferroelectric material



Photoplate 6: SEM image of sample before carbonization

10.8 Equations: All equations should be typed using MathType or similar style. Equations should have equation numbers numbered sequentially throughout the thesis. For example:

$$R_s T = a \times \exp^{b \times T} \dots\dots (i)$$

10.9 Color Pages:

- a) Color graphics, photographs, etc. can be used when appropriate. However, all copies of the thesis must be identical.
- b) The color images must be clear with high resolution prints.

10.10 References and Citations

The referencing and citations should be followed as APA 7th edition or as appropriate to subject of research but should be same throughout the subject.

The reference can be cited either **narratively** (author's name as part of the sentence) or **parenthetically** (author's name in parenthesis after the sentence).

The typical style of writing references and citations in APA format is as follows:

Books

a) One Author:

[Surname], [Initial uppercase letter of author's name]. [(Year)]. [*Title of the Book*]. [Publication, Place].

Kimmerer, R. W. (2021). *Gathering Moss: A Natural and Cultural History of Mosses*. Penguin Books Limited, London, UK.

Citation in the text: (Kimmerer, 2021) or Kimmerer (2021) blends with

b) Two Authors:

Michaels, P. J., & Balling, R. C. (2000). *The satanic gases: Clearing the air about global warming*. Washington, DC: Cato Institute.

Citation in the text: (Michaels & Balling, 2000) or Michaels and Balling (2000) stated that...

c) Two editors (instead of authors):

Burley, J., and Harris, J. (Eds.). (2002). *A companion to genetics: philosophy and the genetic revolution*. Blackwell.

Citation in the text: (Burley & Harris, 2002) or Burley and Harris (2002) studied the multifaceted

d) Multiple Authors:

Pretsch, E., Bunhlmann, P., and Badertscher, M. (2009). *Structure Determination of Organic Compounds – Tables of Spectral Data* (4th ed.). Springer-Verlag GmbH, Heidelberg, Berlin, Germany.

Citation in the text: (Pretsch, *et al.*, 2009) or Pretsch, *et al.* (2009) explained

Papp, S., Weidinger, W., Munro, K., Ortner, B., Cadonna, A., Langs, G., Licandro, R., ... , Zauner, G. (2022). *The Handbook of Data Science and AI: Generate Value from Data with Machine Learning and Data Analytics*. Hanser Publications.

Citation in the text: ... (Papp, *et al.*, 2022) or Papp *et al.* (2022) ...

e) e-book:

Zou, X. and Zhu, G. (2019). *Carbon-based membranes: In Microporous materials for separation membranes*.

<https://onlinelibrary.wiley.com/doi/book/10.1002/9783527343997>.

Citation in the text: ... (Zou & Zhu, 2019) or Zou and Zhu (2019) examined the use of ...

Journal Articles:

a) Single Author:

Corey, E. J. (2002). Catalytic enantioselective Diels-Alder reactions: Methods, mechanistic fundamentals, pathways, and applications. *Angewandte Chemie International Edition*, 15(10), 1650-1667.

Citation in the text: (Corey, 2002) or Corey (2002) pointed out that

b) Two Authors:

Hoover, D. L., & Smith, W. K. (2025). The growing threat of multiyear droughts. *Science*, 387(6731), 246-247. DOI: [10.1126/science.adu7419](https://doi.org/10.1126/science.adu7419)

Citation in the text: (Dahal & Adhikari, 2012) or Dahal and Adhikari (2012) studied the diffusion of

c) Multiple Authors:

Bhattacharai, D. P., Aryal, S., Shrestha, K. R., Mishra, P. K., Shrestha, T., Homagai, P. L., Oli, H. B., & Shrestha, R. L. (2025). Study of the electrochemical performance of *Zanthoxylum armatum* seed-derived potassium hydroxide-assisted activated carbon as a negative electrode material for supercapacitor applications. *Materials Advances*, 6, 1635 – 1646. <https://doi.org/10.1039/D4MA00980K>

Citation in the text: (Bhattacharai *et al.*, 2025) or Bhattacharai, *et al.* (2025) reported

Ramirez-Ortiz, G., Valencia-Méndez, O., Hernández, L., González-Mendoza, T., & López Pérez, A. (2025). Conservation of fish diversity in protected sites and adjacent fishing areas of the Southern Mexican Pacific Ocean. *PLoS One* 20(6): e0324155. <https://doi.org/10.1371/journal.pone.0324155>

Citation in the text: ((Ramirez-Ortiz *et al.*, 2025) or Ramirez-Ortiz, *et al.* (2025) reported

d) Journal article with the same author and publication year:

Bednarik, R. G. (2003a). A figurine from the African Acheulian. *Current Anthropology*, 44(3), 405-413.

Bednarik, R. G. (2003b). Seafaring in the Pleistocene. *Cambridge Archaeological Journal*, 13(1), 41-66.

e) e-Journal

Im, M. S., Khovanov, M., & Ostrik, V. (2025). Universal construction in monoidal and non-monoidal settings, the Brauer envelope, and pseudocharacters. *Theory and Applications of Categories*, 44(2), 15 – 83.

<http://www.tac.mta.ca/tac/volumes/44/2/44-02.pdf>

Citation in the text: (Im et al., 2020) or Im et al. (2012) ...

Ph.D. / Master's Thesis

Chaudhary, D. K. (2023). *Study on Electrical and optical properties of Zinc oxide semiconductor for gas sensor application* (Doctoral thesis). Institute of Science and Technology, Tribhuvan University, Kathmandu, Nepal.

Acharya, K. (2019). Temporal pattern of litter decomposition and nutrient dynamics of different ecosystems on the southern slope of Shivapuri-Nagarjun National Park (M. Sc. Thesis) Central Department of Botany, Institute of Science and Technology, Tribhuvan University, Kathmandu, Nepal.

Conference proceedings

Bonacin, R., Nabuca, O. F., & Pierozzi, I. (2014). Modeling the impacts of agriculture on water resources: Semantic interoperability issues. In S. M. Reddy (Ed.), *Proceedings of the 23rd IEEE International WETICE Conference* (June 23–25, 2014, Parma) (pp. 447–452). CPS. <https://doi.org/10.1109/WETICE.2014.17>

Publication in the web

World Health Organization (WHO). (2021, June 15). Laboratory biosafety guidance related to coronavirus disease (COVID-19):

Interim guidance. *World Health Organization.*
<https://www.who.int/publications/i/item/WHO-WPEGIH-2021.1>

11. Appendices

An appendix should include materials that supplement the main text of the thesis. It may include:

- Supplementary original data, summary tabulations
- Questionnaires
- Ethical approval letter and consent forms
- Illustrative materials
- Detailed derivation of equations
- Other relevant information

All appendices must be numbered consecutively (Appendix A, Appendix B...or Appendix 1, Appendix 2...).

The number Appendix A (or B, C) and the title of the Appendix must be bold and centered.

All appendices must be cited in the text (as for Tables and Figures).

12. Effectiveness of the Guideline

This guideline will be effective from 5th Manshir, 2082 onwards.

Appendix

Appendix A: Format of cover page of thesis proposal

[Title of the Thesis Proposal]

Comment: Capitalize each word except article and preposition, **Bold**, Font size 18, Center aligned



**A Thesis proposal submitted to the
Department of ... [Name of the Department] /
[Name of the campus] / Campus
for approval**

Comment: Capitalize each word except article and preposition, Font size 14, **Bold**, Center aligned

By

Comment: Center, not bold, Font size 14

[Full Name of the Student]

Symbol No....

T.U. Registration No.....

Comment: Center, Capitalize each word, **Bold**, Font size 14

[Month, YYYY]

Comment: Center, All caps, **Bold**, Font size 14

Appendix B: Format of title and cover pages sample of thesis

[Title of the Thesis]

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 18*



A thesis submitted for the partial fulfillment of the requirements for the Master of Science (M. Sc.) Degree in ... [Name of subject]...

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 14*

**Submitted to the
the Central Department of ... [Name of the Department] /**

/ [Name of the campus]...

Institute of Science and Technology

Tribhuvan University

NEPAL

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 14*

By

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 14*

[Full Name of the Student]

Exam Roll No...., T.U. Registration No...

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 14*

[Month, YYYY]

Comment: *Times New Roman, Upper case, Bold, Center aligned, Font size 14*

Appendix C: Declaration from the student

Declaration

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16*

This thesis entitled "... [**Title, bold faced letter**] ..." which is being submitted to the Department of ...[Name of the department]..., ...[Name of the Campus]..., Institute of Science and Technology (IoST), Tribhuvan University, Nepal for the partial fulfillment of the requirement to the Master of Science Degree in ...[Name of subject]... has been carried out by me under the supervision of ...[**Name of supervisor, bold faced letter**]... and co-supervision of ...[Name of co-supervisor, if any]... at Central Department of ... [Name of the department]..., ... [Name of the Campus/Institute]... Campus. This work is original and has not been submitted earlier in part or full in this or any other form to any other institution for the award of any degree.

Comment: *Times New Roman, Font size 12, Justified, Line spacing 1.5*

[Signature]

[Name of the student]

Comment: *Times New Roman, Bold faced, Left aligned, Font size 12, Line spacing 1.5*

Date: [Month] DD, YYYY

Appendix D: Recommendation from the supervisor

Recommendation

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16*

This is to recommend that ...[**Name of student, bold**] has carried out the thesis entitled “...[**Title, bold**]...” For the partial fulfillment of the requirement of M. Sc. In ...[Subject]... under my/our supervision. To my/our knowledge, this work has not been submitted to any other institution for any academic degree. He / She has fulfilled all the requirements of the ...[Name of the department]..., [Name of the campus}..., Institute of Science and Technology (IoST), Tribhuvan University, Nepal for the submission of the thesis for the Master of Science degree in ...[Name of subject]...

Comment: *Times New Roman, Font size 12, Justified, Line spacing 1.5*

Supervisor (Comment: *Times New Roman, Left aligned, Bold, Font size 12)*

[**Name of Supervisor**]

[...**Designation** ...]

[Department], [Campus/Institute]

Tribhuvan University, Kathmandu Nepal

Comment: *Times New Roman, Left aligned, Font size 12*

Co-Supervisor (if any)

[**Name of Co-Supervisor**]

Comment: *Times New Roman, Bold, Left aligned, Font size 12*

[...**Designation** ...]

[Department], [Campus/Institute]

Tribhuvan University, Kathmandu Nepal

Comment: *Times New Roman, Left aligned, Font size 12*

[**Month DD, YYYY**]

Comment: *Times New Roman, Bold, Center aligned, Font size 12*

Appendix E: Letter of approval

(This should be in Department / Campus letter head)

Letter of Approval

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16*

The thesis work entitled ...**[Title of the Thesis in Boldface Letters]**... submitted at the ...**[Name of Department]**..., ...**[Name of Campus]**..., Institute of Science and Technology, Tribhuvan University by [...**Name of Student in Boldface Letters**] has been accepted for the partial fulfillment of M. Sc. in

(Comment: *Time New Roman, Font size: 12, Justified, Line space: 1.5*)

External Examiner

[Name of External Examiner]

Designation

Comment: *Times New Roman, Bold, Font size 12*

[Department]

[Affiliated Campus/Institute]

Kathmandu, Nepal

Internal Examiner

[Name of Internal Examiner]

Designation

[Department]

[Campus/Institute]

Tribhuvan University

Kathmandu, Nepal

Comment: *Times New Roman, Font size 12*

Supervisor

[Name of Supervisor]

Designation

[Department]

[Name of Campus/Institute]

Tribhuvan University

Kathmandu, Nepal

Co-Supervisor (if any)

[Name of Co-Supervisor]

Designation

[Department]

[Affiliated Institute]

Tribhuvan University

Kathmandu, Nepal

Master's Program

Coordinator (*In case of Campus*)
[Name of the Coordinator]
[Department]
[Campus/Institute]
Tribhuvan University
Kathmandu, Nepal

Head of the Department
[Name of Head of Department]
[Department]
[Campus/Institute]
Kathmandu, Nepal

[Month, YYYY]

Appendix F: Acknowledgements

Acknowledgements

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16.*

Text: Not more than 1 page

Comment: *Times New Roman, Justified, Font size 12, line spacing within a paragraph 1.5, spacing between two paragraph 2.0*

(Name of student)

[Month, YYYY]

Appendix G: Abstract

Abstract

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16*

Text: Not more than 350 words

Comment: *Times New, Roman, Font size 12, Justified, Line spacing 1.5)*

Keywords: (Five Keywords], ..., ..., ..., ...

Comment: *Times New Roman, Font size 10, Italics.*

Appendix H: Abstract in Nepali

शोधसार

Comment: *Unicode, Bold, Center aligned, Font size 18*

मुल पाठ: १५० शब्द भित्र समेटिनेगरी लेखनुपर्ने, मौलिक लेखन हुनुपर्ने, गुगल वा एआईबाट उल्था गरेको हुनु हुँदैन

Comment: *Unicode, Font size 12, Justified, Line spacing 1.5*

शब्द कुञ्जिका : पाँच वटा मुख्य शब्दहरू (प्राविधिक शब्दहरू उल्था गर्नु जरूरी छैन)

Comment: *Unicode, Font size 10, Italics.*

Note: The content of शोधसार should be as per the guideline provided by Research Committee of IoST, TU. The contents of the guideline is as follows.

नेपाली भाषामा सार लेख्ने सम्बन्धमा

- नेपाली भाषाको व्याकरण प्रयोग गर्ने ।
- नेपाली बृहत् शब्दकोश (प्रकाशक: नेपाल प्रज्ञा प्रतिष्ठान, नेपाल) मा रहेका प्राविधिक शब्दहरू मात्र प्रयोग गर्ने । अन्य अङ्ग्रेजी शब्दहरू अङ्ग्रेजी भाषामै लेख्न सकिने ।
- कुनै पनि Language Translator Tool (Google, Chat GPT etc.) प्रयोग गरी अनुवाद गर्न नहुने ।
- Dissertation /Thesis मा रहेको Abstract को शब्द अनुवाद नगरी भाव अनुवाद गर्ने ।
- सार (Abstract) लाई नेपाली युनिकोडमा (कालीमाटी फन्टमा) १२ साइजमा टाइप गरेको हुनुपर्ने ।

Appendix I: Abbreviations and acronyms

List of Abbreviations and Acronyms

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16*

Write your abbreviations and acronyms here.

Comment: *Times New Roman, Font size 12, line spacing 1.5, entries should be alphabetical order*

Examples:

FTIR : Fourier Transforms Infrared Spectroscopy
GC-MS : Gas Chromatography-Mass Spectroscopy
LPG : Liquefied Petroleum Gases
SEM : Scanning Electron Microscopy]

Appendix J: Symbols

List of Symbols (if any)

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16*

Write the symbols use in the body text here.

Comment: *Times New Roman, Font size 12, line spacing 1.5, entries should be alphabetical order*

Examples:

γ	Activity Coefficient
μ	Dipole moment
ε	Relative Dielectric Constant]

Appendix K: Tables

List of Tables

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16*

	Page No.
Table 1: [Table caption]	Page no.
Table 2: [Table caption]	Page no.

Comment: *Times New Roman, Only **Table no.** in **Bold**, Table caption not bold, Justified, Font size 12, line spacing 1.5*

Appendix L: Figures

List of Figures

Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16*

	Page No.
Figure 1: [Figure caption]	Page no.
Figure 2: [Figure caption]	Page no.

Comment: *Times New Roman, Only **Figure no.** in **Bold**, Figure caption not bold, Justified, Font size 12, line spacing 1.5*

Appendix M: Table of contents

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Comment: *Times New Roman, Capitalize each word, Bold, Center aligned, Font size 16*

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1.2.1 General objective	page no.
1.2.2 Specific objectives	page no.
1.3. Rationale	page no.
1.4. Significance	page no.
1.5. Limitations	page no.
1.6. [Subheading] (<i>if any</i>)	page no.

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- 2. Literature Review** page no.
- 4.1. Subheading (*if any*) page no.
- 4.2. Subheading (*if any*) etc... page no.

Chapter 3

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- 3.1. Materials page no.
 - 3.1.1. Subheading, (*if any*) page no.
 - 3.1.2. Subheading, (*if any*), etc.... page no.
- 3.2. Methods page no.
 - 3.2.1. Subheading, (*if any*) page no.
 - 3.2.2. Subheading, (*if any*) page no.

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- 4. Results and Discussion** page no.
- 4.1. Subheading, (*if any*) page no.
- 4.2. Subheading, (*if any*), etc. ... page no.

Chapter 5

- 5. Conclusion and Recommendations** page no.
- 6.1. Conclusions page no.
- 6.2. Recommendations for Further Work/Future Prospects page no.

References (*Times New Roman, Capitalize each, bold, Font size 14, line spacing 2*) page no.

Appendix (*Times New Roman, Capitalize each, bold, Font size 14, line spacing 2*)

Master’s Program

Appendix N: Mark ledger of the thesis student

Date:/.../...

To,
The Office of Dean,
M. Sc. Exam Section,
Tribhuvan University,
Kathmandu, Nepal.

Subject: Marks of M. Sc. Thesis

Sir / Madam,
Marks obtained by Mr. / Ms. (Batch) for the evaluation of Thesiss conducted at the Department of, Campus for the partial fulfillment of M. Sc. in has been forwarded. The details are as follows:

Year/Semester:

Course Code:

Full Marks:

Pass Marks:

Title of Thesis:

Date of submission: (BS)/ (AD)

Date of viva-voce: (BS)/ (AD)

S.N.	Symbol No.	T.U. Regd. No.	Name of Student	GPA	Grade
1.					

Plagiarism Report Summary: Similarity Indexpercent using Thenticate Software.

(Original Plagiarism Report obtained from iThenticate is attached herewith)

