Dissertation

Code No.: MDS699

Course Title: Dissertation   **Full Marks:** 150

Nature: Dissertation   **Credit:** 6

Course Description:

Dissertation is a formal piece of academic writing required for the completion of Master's degree in Data Science program. The final and central requirement for awarding the degree is the completion of substantial and original independent dissertation research in the data science field. Dissertation is a research paper of full marks 150 offered in 4th semester of the program. It represents the culmination of a student's research and scholarly work in a particular field of data science. The purpose of this course is to contribute new knowledge, insights, or perspectives to the academic community and is expected to present original research and in-depth analysis of the chosen topic.

Course Objective:

The main objective of this course is to familiarize students with the skills needed to conduct in-depth study in the data science field to conduct an original research and contribute new knowledge to the data science community.

Learning Outcomes:

Upon successful completion of this course, students will be able to:

1. design and conduct an original research in the data science field,
2. contribute new knowledge to the academic community in the relevant field,
3. apply different theoretical concepts taught in the class in the chosen topic, and
4. conduct in-dept analysis of the chosen topic and enhance their research skills.

Phases:

The overall dissertation work is divided into three phases, proposal defense, pre-defense, and final defense.

1. **Proposal Defense**

    Each student must prepare a document in the prescribed proposal format proposing a specific plan for her or his dissertation research. This document is expected to make a convincing case that the proposed research is likely to make an original contribution. Students must present the research proposal in the research committee. Once accepted from the research committee, students can start their work under the supervision of a supervisor assigned from the research committee.

2. **Pre-Defense**

    Each student must prepare draft of the dissertation report and present this report in the research committee before final defense. Once approved from the research committee, students will be allowed to participate in the final defense. Each member of the committee members can advise the student about major revisions and additions to the tasks of research.

3. **Final Defense**

    During final defense, each student must prepare a final report in the prescribed format and present this final report. Students are expected to explain the significance of the dissertation research, justify the methods employed, and defend the conclusions reached. The overall dissertation work will be evaluated during final defense by the school director, an external examiner, the supervisor, and an internal examiner. The external examiner will be appointed from Institute of Science and Technology and the internal examiner will be appointed by the school director.

Activities:

The different activities and steps involved in the dissertation research are:

- Select the research topic
- Prepare and present research proposal
- Do the research and draw conclusion
- Prepare and present draft report
- Prepare and present final report

Proposal Structure:

The dissertation proposal document generally follows the following structure:

- Title Page
- Introduction
- Problem Statement
- Objectives
- Rational of the Study
- Preliminary Literature Review
- Methodology
- Expected Outcomes
- Working Schedule
- References

Final Report Structure:

The final report of the dissertation generally follows the following structure:

- Title Page
- Student's Declaration
- Supervisor's Recommendation
- Approval Sheet
- Acknowledgement
- Abstract
- Table of Contents
- List of Figures
- List of Tables
- List of Abbreviations / Acronyms
- Introduction (Chapter 1)
- Literature Review (Chapter 2)
- Methodology (Chapter 3)
- Result and Discussion (Chapter 4)
- Conclusion and Recommendation (Chapter 5)

- References
- Appendices