

**CERTIFICATE COURSE IN DATA ANALYSIS
(CCDA)**

**Syllabus and Curriculum
2026**

NLDSB

National Library & Documentation Services Board

INTRODUCTION

The National Library of Sri Lanka was established on 27th April 1990. Ceylon National Library Services Board Act No.17 of 1970 provided the legal base for the National Library in its initial period. The National Library and Document Services Board's new amendment, Act No. 51, was introduced in 1998. The powers and responsibilities of the National Library were clearly spelled out for the first time, and this was a fulfillment of a long-felt need. Organizing and introducing this new institution to the country and the general public has become arduous.

The National Library is mainly a research and reference library, the main library and information center in Sri Lanka. It intends to provide library resources and information to all Sri Lankans through the National Library. The current library material stock of approximately 1,000,000 volumes will form the nucleus of the future national collection.

Currently, the National Library of Sri Lanka is conducting several money-oriented workshop series for the public on research methodology, book building, and training programs for librarians on book building, conservation and preservation, library automation, soft skills, and capacity development programs. Therefore, National Library has identified timely essential courses for the general public and the library staff of the county. Thus, it has recognized suitable resource persons for the relevant field.

AIM

- To provide a better understanding of data analysis in social research.

OBJECTIVES

The objectives of this Certificate Course are as follows:

- To enhance a comprehensive understanding of the usage of collecting data and organizing data.
- To provide an understanding of the basics of Statistics
- To provide an in-depth understanding of various statistical measures

PROGRAMME LEARNING OUTCOMES:

Upon successful completion of the CCRM, students will; be able to

- Demonstrate sound theoretical knowledge and practical applications of data analysis
- Apply high-quality data processing. procedures
- Learn quantitative data analysis techniques using SPSS.
- Practice qualitative data analysis using NVivo

PROGRAMME COURSE UNITS

Subject Code	Subject Name	Credit value	Status
CCDA 1013	Introduction to Data Analysis	03	Compulsory
CCDA 1023	The Study of Data Processing	03	Compulsory
CCDA 1033	Quantitative Data Analysis using SPSS	03	Compulsory
CCDA 1043	Qualitative Data Analysis using NVivo	03	Compulsory
CCDA 1053	Data Interpretation and Report writing	03	Compulsory
Total Credits		15	

DETAILED SYLLABUS

Course Code	:	CCDA 1013
Title	:	Introduction to Data Analysis
Credit Value	:	03
<p>Intended Learning Outcomes: After completion of this subject unit, the student will be able to;</p> <ul style="list-style-type: none"> • Understand the definition and types of data • Learn methods of quantitative and qualitative data collection • Understand basic stages of data analysis. • Determine basic measurements /techniques of data reading. 		
<p>Contents:</p> <ul style="list-style-type: none"> • Introduction to data analysis; definitions, purpose, essential characteristics, types of data, methods of data collection and analysis • Data processing; Data preparation and data cleaning, editing, coding and imputation • Basic measurements of data reading, relational measures, and their functions • Nature of association measures; interval, nominal, ordinal and dichotomous, the test of significance. • Introduction to data analysis methods: descriptive (mean, median, mode, variance, standard deviation, and range), and inferential statistics (parametric test and non-parametric test), qualitative and quantitative data analysis • Steps of data analysis; data preparation, describing the data, drawing the inference of data, interpretation of data 		

Course code	:	CCDA 1023
Title	:	Data Processing Techniques
Credit Value	:	03
<p>Intended learning outcomes: After completion of this subject unit, the student will be able to;</p> <ul style="list-style-type: none"> • Describe the essential documents on primary data collection. • Determine the essential characteristics of the study of documents. 		
<p>Contents:</p> <ul style="list-style-type: none"> • Introduction to the study of documents; types of documents; public documents, personal documents and physical evidences, sources of documentary data, document analysis process, credibility of documentary sources • Meta-analysis • Content analysis • Text analysis • Conversation analysis 		

Course code	:	CCDA 1033
Title	:	Quantitative Data Analysis using SPSS
Credit Value	:	3
<p>Intended Learning Outcomes: After completion of this subject unit, the student will be able to;</p> <ul style="list-style-type: none"> • Apply several statistical procedures in data analysis using SPSS • Interpret the output of several different statistical tests • Interpret the results of statistical analyses using the APA format • Design the data analysis plan for surveys and evaluation studies using SPSS • Interpret all the results from the data analysis using SPSS 		
<p>Contents:</p> <ul style="list-style-type: none"> • Introduction to SPSS (Data Management and Data Handling) • Descriptive Statistics, Normality Tests, Crosstabs and bi-variate analysis • Hypothesis Testing (Parametric and Non-Parametric Tests) • Correlation, Regression – Simple/Multiple/Logistic 		

Course Code	:	CCDA 1043
Title	:	Qualitative Data Analysis using NVivo
Credit Value	:	03
<p>Intended learning outcomes: After completion of this subject unit, the student will be able to;</p> <ul style="list-style-type: none"> • Identify the basics of NVivo and set up a project • Discuss qualitative data analysis procedure in NVivo • Understand-how to interpret the output/results of qualitative data analysis using NVivo • Sharing a piece of practical knowledge by using NVivo • Interpret the results from the data analysis using SPSS 		
<p>Contents:</p> <ul style="list-style-type: none"> • Introduction to Qualitative Research • Introducing NVivo and setting up a project • Importing and Coding documents • Exploring the data • Analysis & theme development • Classifying & categorizing data • Conducting a literature review using NVivo • Practical session to analyze qualitative data sets 		

Course code	:	CCDA 1053
Title	:	Data Interpretation and Report Writing
Credit Value	:	03
<p>Intended learning outcomes</p> <p>After completion of this subject unit, the student will be able to;</p> <ul style="list-style-type: none"> • Write with clarity and precision • Develop and support your ideas persuasively • Organize ideas logically and with clear transitions • Master the basics of sentence structure, formatting, and punctuation 		
<p>Contents:</p> <ul style="list-style-type: none"> • Academic writing vs. non-academic writing: Difference between academic writing and non-academic writing, Word usage in academic writing, and Things to avoid in academic writing. • Grammar rules in academic writing: Subject-verb agreement, Articles, prepositions, and conjunctions, Active voice, and passive voice • Academic writing in sentence level: Constructing complex sentences, Use of punctuation in sentence construction, Common errors in sentence structures, Summarizing, Paraphrasing, How to Avoid Plagiarism • The report on qualitative research • The report on qualitative research • Structure and content of the research report 		