
SYLLABUS FOR BOARD OF STUDIES ADOPTION — generated from the live catalogue record

Data Science for Non-Computing Faculty

FDP-05 · 5 days (configurable 1–5 days) · Informatics · Data and Analytics

CONTENTS

1. Overview	2
2. Hours and credit position	2
3. Course outcomes	2
4. Course content — modules	2
5. Assessment scheme (100 marks)	2
6. CO–PO mapping	2
7. Every participant receives	3
8. Fee	3
9. Designed by	3

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OVERVIEW

Faculty from any department leave able to analyse their own data and defend the result.

Commerce, science and management departments hold data they cannot analyse, and send it to computing colleagues who do not know the domain. This closes that gap.

HOURS AND CREDIT POSITION

Contact hours: 30 Guided project: 8 Self-study: 7 Notional total: 45

Credit claim: none

Offered as a non-credit programme. The hours above are stated for transparency; the college may position it inside value-added / add-on frameworks at its discretion.

COURSE OUTCOMES

- CO1. Prepare a raw dataset for analysis and record every change made to it (K3)
- CO2. Summarise a dataset using measures appropriate to its distribution (K3)
- CO3. Test a stated hypothesis and interpret the result without overclaiming (K4)
- CO4. Select a chart that represents the data honestly and explain why (K5)
- CO5. Produce an end-to-end analysis of departmental data for a non-specialist reader (K6)

COURSE CONTENT — MODULES

Hours shown are the recommended format; module time scales proportionally when the engagement runs 1–5 days.

Module 1 — Data and its shape (6h recommended)

Theory: Types, cleaning, missing values, the cost of bad data

Lab: Clean a supplied messy dataset

Output: Cleaned dataset with a change log

Module 2 — Describing data (6h recommended)

Theory: Distributions, central tendency, spread, the summary that misleads

Lab: Summarise your own departmental data

Output: Descriptive summary

Module 3 — Relationships and inference (6h recommended)

Theory: Correlation, significance, confidence, the errors that get published

Lab: Test a stated hypothesis

Output: Test result with interpretation

Module 4 — Visualising honestly (6h recommended)

Theory: Chart choice, axes, scale, the chart that lies

Lab: Rebuild a misleading chart

Output: Before-and-after chart pair

Module 5 — A departmental analysis (6h recommended)

Theory: End-to-end analysis on your own data, written for a non-specialist

Lab: Produce and present the analysis

Output: Analysis report

ASSESSMENT SCHEME (100 MARKS)

Cleaned dataset and change log — 25 marks

Hypothesis test and interpretation — 30 marks

Departmental analysis report — 45 marks

CO-PO MAPPING

CO1 !' PO5 (strength 3)

Data preparation is the tool skill everything downstream depends on.

CO2 !' PO1 (strength 2)

Descriptive statistics are the underlying knowledge.

CO3 !' PO4 (strength 3)

Hypothesis testing with honest interpretation is the investigation outcome.

CO4 !' PO10 (strength 3)

Honest visualisation is communication with evidence.

CO5 !' PO6 (strength 2)

A departmental analysis is the contextual outcome for the college.

EVERY PARTICIPANT RECEIVES

- Certificate of completion
- Course material
- LMS access

FEE

On your college's quotation

Excludes the optional nasscom assessment where offered. Final pricing on your college's quotation.

DESIGNED BY

Venkat Kurela — Founder, Kurela Cognisive Pvt Ltd