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

Quantitative Analytics for Finance and Business

S-09B · 3 days (configurable 1–5 days) · Informatics · Data & Analytics · Years: 2nd, 3rd, PG

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OVERVIEW

Time series, forecasting, risk basics and a working forecasting model.

Forecasting and risk analytics drive decisions in every business; students who can build a working forecasting model bring directly employable quantitative skills.

HOURS AND CREDIT POSITION

Contact hours: 24 Guided project: 6 Self-study: 0 Notional total: 30

Credit claim: 1
30 notional hours ÷ 30 hours per credit (NSQF track, UGC Micro-credentials Guidelines §5.3.3) = 1 credits.

COURSE OUTCOMES

CO1. Describe the quantitative analytics workflow for a business problem (K2)
CO2. Decompose a time series into trend and seasonality (K4)
CO3. Build a forecasting model using appropriate methods (K3)
CO4. Evaluate forecast accuracy using error metrics (K4)
CO5. Produce a forecast with a documented business recommendation (K5)

COURSE CONTENT — MODULES

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

Module 1 — Business analytics foundations (4h recommended)
Theory: The quantitative workflow, data sources
Lab: Frame a business forecasting question
Output: Framing note

Module 2 — Time series basics (4h recommended)
Theory: Trend, seasonality, decomposition
Lab: Decompose a business time series
Output: Decomposition notebook

Module 3 — Forecasting methods (4h recommended)
Theory: Moving averages, exponential smoothing, ARIMA basics
Lab: Build competing forecasts
Output: Forecast notebook

Module 4 — Risk fundamentals (4h recommended)
Theory: Variability, scenario analysis
Lab: Run a scenario analysis
Output: Scenario table

Module 5 — Model evaluation (4h recommended)
Theory: Forecast-error metrics, backtesting
Lab: Backtest and score forecasts
Output: Evaluation report

Module 6 — Forecasting capstone (4h recommended)
Theory: A working forecasting model on business data
Lab: Produce a forecast with a recommendation
Output: Forecast + recommendation

ASSESSMENT SCHEME (100 MARKS)

Continuous lab exercises — 40 marks
Analytical report — 40 marks
Viva voce — 20 marks

CO–PO MAPPING

CO1 !' PO1 (strength 2)
The analytics workflow is foundational knowledge.

CO2 !’ PO4 (strength 2)
Decomposition is investigation of the series.
CO3 !’ PO3 (strength 2)
Building a forecast is solution development.
CO4 !’ PO4 (strength 2)
Error evaluation is investigation.
CO5 !’ PO10 (strength 2)
The recommendation is professional communication.

EVERY PARTICIPANT RECEIVES

- Certificate of completion
- Course material
- LMS access
- Interview question bank
- Mock interview & viva practice
- Optional nasscom NSQF assessment (priced per candidate on your quotation)

FEE

¹750 per student, incl. GST
Excludes the optional nasscom assessment where offered. Final pricing on your college's quotation.

DESIGNED BY

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