

# LOG363 Geospatial Analytics for Decision-Making

**Level:** 3

**Credit Units:** 5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY JAN

## Synopsis:

The amount of data being handled by managers is rapidly increasing. Data is commonly analysed and presented using graphs, charts, trends, and lists. Geospatial analytics provides a new data perspective by illustrating the relationship between the data and its location in physical space. Maps with spatial data offer valuable insights that can be used by managers for better decision-making and communication between peers and customers. LOG363 Geospatial Analytics for Decision-Making aims to equip students with knowledge on principles and methods of Geographic Information Systems (GIS) using QGIS open-source software. The course investigates the processes of manipulation, analysis, presentation and output of geographical data in a GIS. It provides opportunities for the development of problem-solving, decision-making and digital skills. Students will acquire these skills through hands-on exercises and data application.

## Topics:

- Geographic Information System (GIS) and Geospatial Analytics
- Applications of Geospatial Analytics
- Map Projection and Coordinate Reference Systems
- Cartography
- GIS Digital Data
- Spatial Representation of Data
- Vector Data Geometry and Attributes
- Vector Data Usage and Issues
- Georeferencing
- Topology Errors, Tools and Interpretation
- Industry Applications of Geospatial Analytics
- Challenges and the Future of Geospatial Analytics

## Learning Outcome:

- Interpret concepts related to geospatial analytics for decision-making.
- Inspect coordinate reference system for mapping the data.
- Prepare data for geospatial analysis and decision-making.
- Discuss the relevance of vector data in geospatial analytics.
- Set up data for georeferencing and topology analysis.
- Indicate the relevance and challenges of different spatial analyses.

## Assessment Strategies (Daytime Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-COURSE QUIZ 1	2

Overall Continuous Assessment	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	TUTOR-MARKED ASSIGNMENT 1	18
	GROUP BASED ASSIGNMENT 1	20
	PARTICIPATION 1	6
Overall Examinable Components	ECA-REPORT	32.50
	ECA-VIDEO	12.50
	ECA-POWERPOINT	5
<b>Total</b>		<b>100</b>