

**NAGINDAS KHANDWALA COLLEGE OF COMMERCE, ARTS AND
MANAGEMENT STUDIES**

[AUTONOMOUS]

CERTIFICATE COURSE IN GIS

About the Course

Remote Sensing, GIS and GPS are the latest advancements in the world of technology particularly information technology. They play an important role in spatial and aspatial analysis and conduction of research. All the three fields are emerging around the world and are opening new job opportunities. These fields demand experts with excellent practical and theoretical knowledge. The present course is aimed at providing the same to the enrolled individuals. The course would enable the students to be employed at any concerned organization and make a career in this field. Though the course covers scientific parameters, it is suitable for students from all disciplines as it aims to explain the basic concepts and slowly moves on to advanced ones.

A. Course Curriculum

Unit No.	Unit Name
1	Remote Sensing: <ul style="list-style-type: none">a. Introduction to Remote Sensing- concept, principles, types of remotely sensed data- satellite imagery, aerial photographb. History of Indian Remote Sensingc. Application of Remote Sensingd. Open Data Sites for Remotely Sensed Data
2	Global Positioning System: <ul style="list-style-type: none">a. Introduction to GPS- concept, history, componentsb. Applications of GPSc. Hands-on practical- field work
3	Geographical Information System: <ul style="list-style-type: none">a. Introduction to GIS- concept, components, features- point, line, polygon, raster and vector data, DBMSb. Applications of GISc. Introduction to Open Source GIS Software
4	Practical: <ul style="list-style-type: none">a. <u>Remote Sensing:</u><ul style="list-style-type: none">i. Keys of interpretation of imageries and photographsii. Interpretation examples- 2 each of satellite imageries-TCC and FCC; aerial photographs- oblique (high and low) and vertical photographs

	<ul style="list-style-type: none">b. <u>GPS</u>:<ul style="list-style-type: none">i. Report on field work with manual map making of the area surveyed and observationsc. <u>GIS</u>:<ul style="list-style-type: none">i. Examples of point, line and polygon featuresii. Objects in raster and vector data modelsiii. Types of data presentation- graphs and proportional diagrams, types of maps- thematic- choropleth, isopleth, dot maps, etc.
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B. Examination Pattern

1. **Theory Examination = 60 marks**(20 marks objectives + 30 marks subjective+ 10 marks application based question)
2. **One Journal/Project = 30 marks** (10 marks for Remote Sensing, GIS and GPS practical exercises each)
3. **Viva Voce = 10 marks** (Based on journal)

C. Fee Structure

Fees= Rs. 3000/- per student (inclusive of lab, training, tutorials and field work)