



Autonomous (2016-17)

Malad Kandivli Education Society's
NAGINDAS KHANDWALA COLLEGE

**OF COMMERCE, ARTS & MANAGEMENT STUDIES
AND SHANTABEN NAGINDAS KHANDWALA COLLEGE OF SCIENCE**

(Re-accredited (3rd cycle) by NAAC with 'A' Grade)

ISO 9001 : 2015 Certified

Educational Excellence Award By Indus Foundation, U.S.A.

IMC Ramkrishna Bajaj National Quality Commendation Certificate

Syllabus Along With Course Objectives

And

Outcomes Of The Value Added Courses Offered.

**DR. (MRS.) ANCY JOSE
PRINCIPAL**



Nagindas Khandwala College

Autonomous

Certificate course in GIS

Course Objectives:

1. To introduce basic concepts of remote sensing and GIS
2. To explain the various components of GIS
3. To apply the technology of aerial photography for analysis
4. To analyze the various satellite imageries and aerial photographs
5. To develop understanding of GPS and its functioning
6. To assess real time projects using the relevant technology

Course Outcomes:

1. **CO 1:** Learners will be able to recognize the basic concepts of remote sensing and GIS (Level: Knowledge)
2. **CO 2:** Learners will be able to explain the various components of GIS (Level: Comprehension)
3. **CO 3:** Learners will be able to apply the technology of aerial photography for analysis (Level: Application)
4. **CO 4:** Learners will be able to analyze the various satellite imageries and aerial photographs (Level: Application)
5. **CO 5:** Learners will be able to develop understanding of GPS and its functioning (Level: Synthesis)
6. **CO 6:** Learners will be able to assess real time projects using the relevant technology (Level: Evaluation)



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Unit No.	Unit Name
1.	Remote Sensing a. Introduction to Remote Sensing- concept, principles, types of remotely sensed data-satellite imagery, aerial photograph b. History of Indian Remote Sensing c. Application of Remote Sensing d. Open Data Sites for Remotely Sensed Data
2.	Global Positioning System a. Introduction to GPS- concept, history, components b. Applications of GPS c. Hands-on practical-field work
3.	Geographical Information System a. Introduction to GIS-concept, components, features- point, line, polygon, raster and vector data, DBMS b. Applications of GIS c. Introduction to Open Source GIS Software
4.	Practical a. <u>Remote Sensing:</u> i. Keys of interpretation of imageries and photographs ii. Interpretation examples- 2 each of satellite imageries-TCC and FCC; aerial photographs- oblique (high and low) and vertical photographs b. <u>GPS:</u> Report on field work with manual map- making of the area surveyed and observations c. <u>GIS</u> i. Examples of point, line and polygon features ii. Objects in raster and vector data models iii. Types of data presentation- graphs and proportional diagrams, types of maps- thematic- choropleth, isopleth, dot maps, etc.




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