

CE 3010: FUNDAMENTALS OF REMOTE SENSING AND GIS

Dr. K.B.V.N.Phanindra

Segments: 1 to 4 (03 Jan – 16 Mar, 2022)

Credits: 2

Mode of Teaching: HYBRID

Class Meeting: B-114 <https://meet.google.com/zrm-qygg-utv>

Mon – 12:00 ; Tue – 09:00 ; Fri – 11:00

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Spring 2022

Department of Civil Engineering, I I T Hyderabad

**CE 6610: RS & GIS APPLICATIONS TO
CIVIL ENGINEERING**

**CC 5200: RS, GIS, AND CLIMATE
CHANGE**

**CE 321: REMOTE SENSING & GIS
(IIIT RAICHUR)**

COURSE CONTENTS

Segments 1 & 2

1) REMOTE SENSING (Theoretical concepts)

Segments 3 & 4

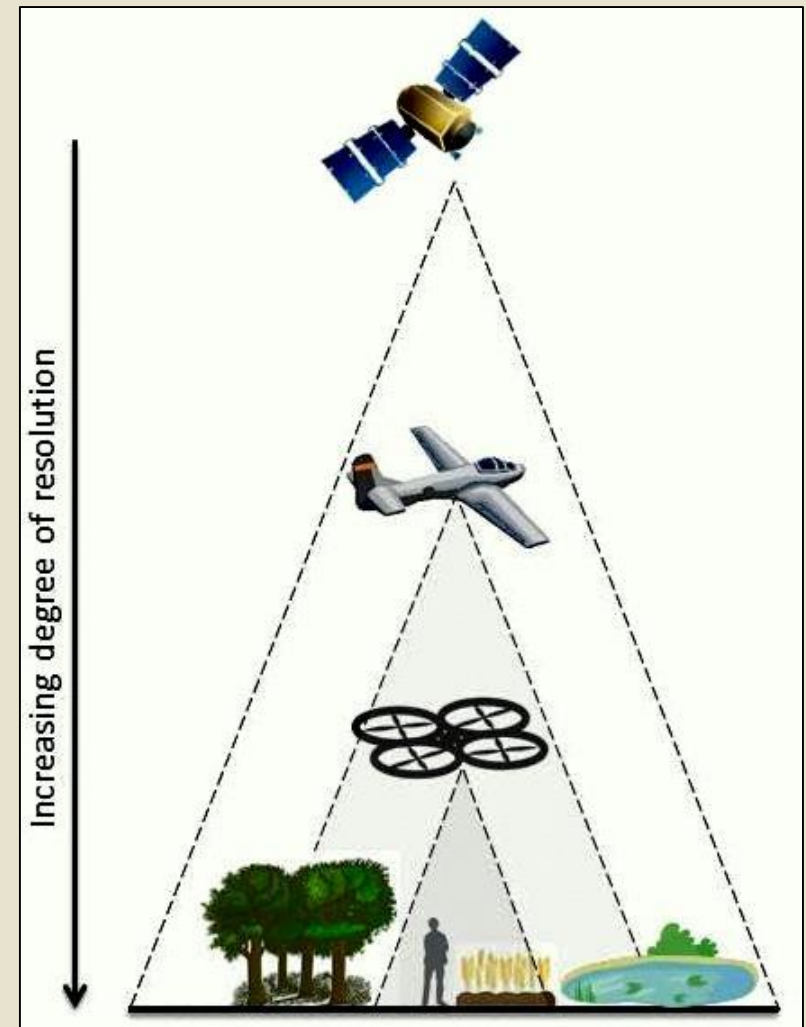
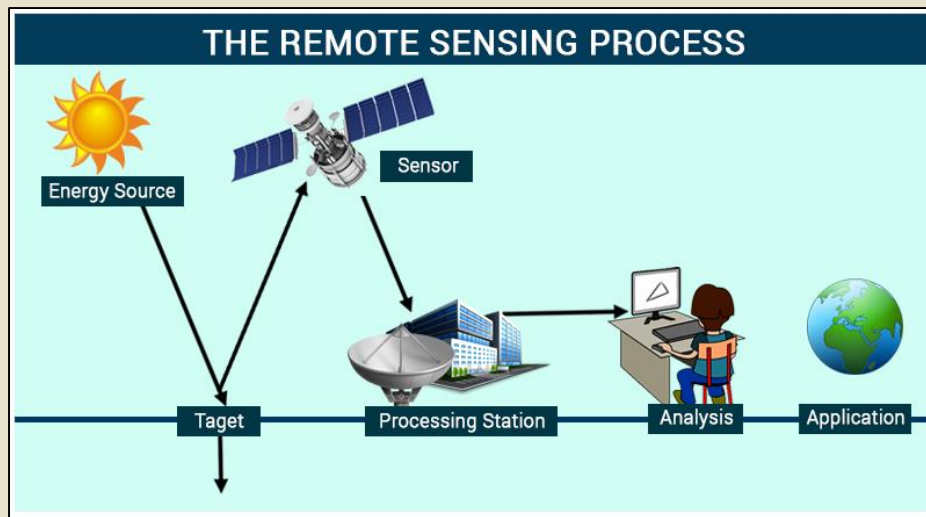
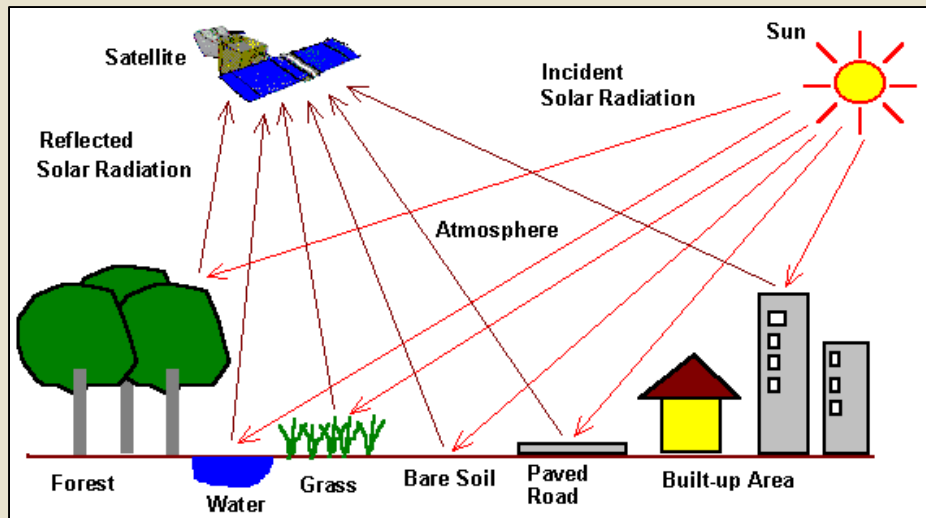
2) GEOGRAPHIC INFORMATION SYSTEMS (Theoretical concepts)

REMOTE SENSING (CONCEPTS)

- 1) Principles of Electro Magnetic Radiation (EMR)
- 2) Remote Sensing Sensors
- 3) Image Acquisition Techniques
- 4) Data analysis and Image Interpretation
- 5) Land observation Satellites

10 to 12 Lectures – 2 Quizzes

REMOTE SENSING (CONCEPTS)



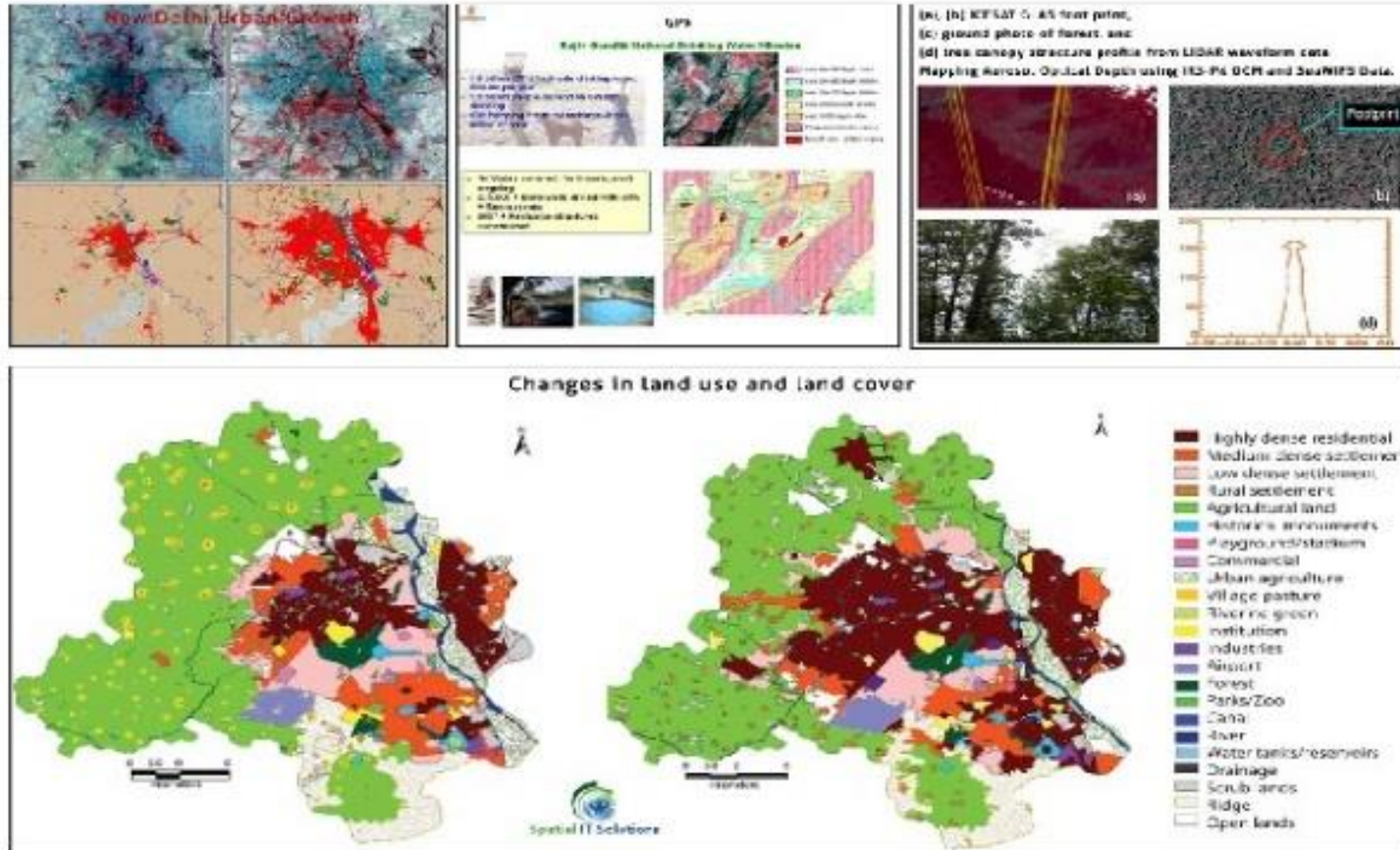
REMOTE SENSING (APPLICATIONS)

Remote Sensing Applications in

- Agriculture and crop water management
- Land Use Land Cover Mapping
- Water Resources and change detection
- Climate Change

REMOTE SENSING (APPLICATIONS)

APPLICATIONS OF REMOTE SENSING



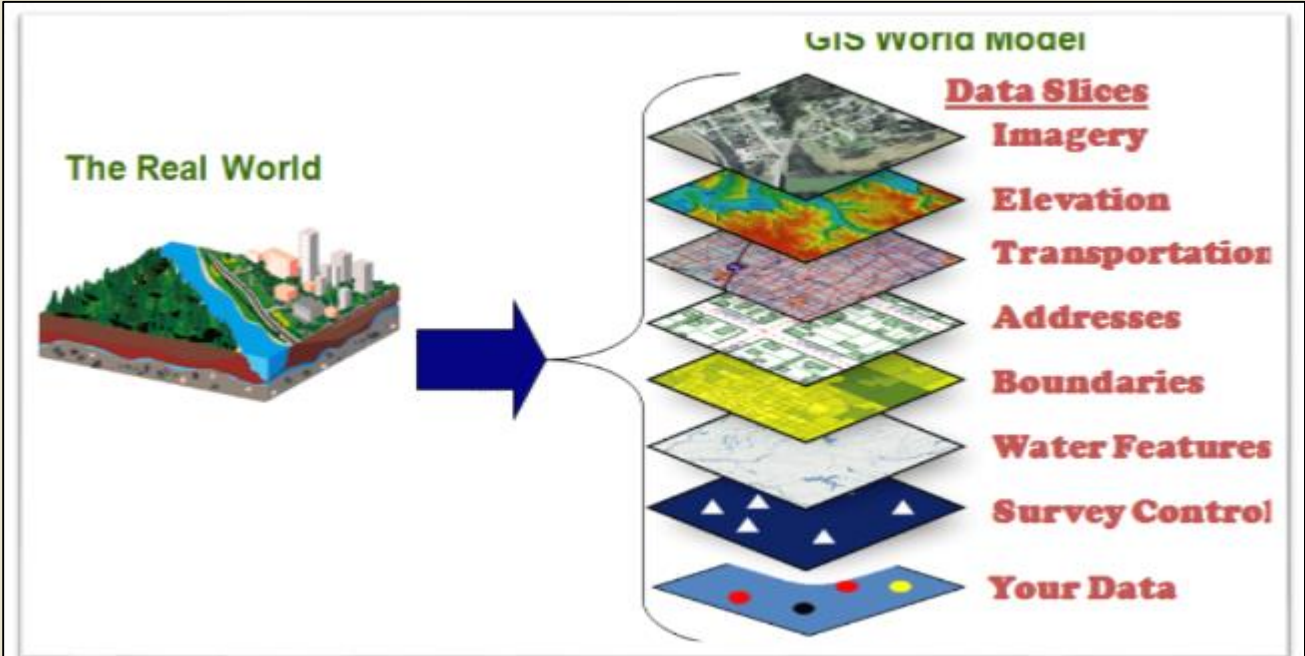
Read More: Geospatial Consulting Services

GIS (CONCEPTS)

- 1) Geographic and Map Concepts – Overview
- 2) Map Projections
- 3) Spatial Data Management
- 4) Non-spatial Data Management
- 5) GIS Analysis and Modeling

10 to 12 Lectures – 2 Quizzes

GIS (CONCEPTS)



GIS APPLICATIONS

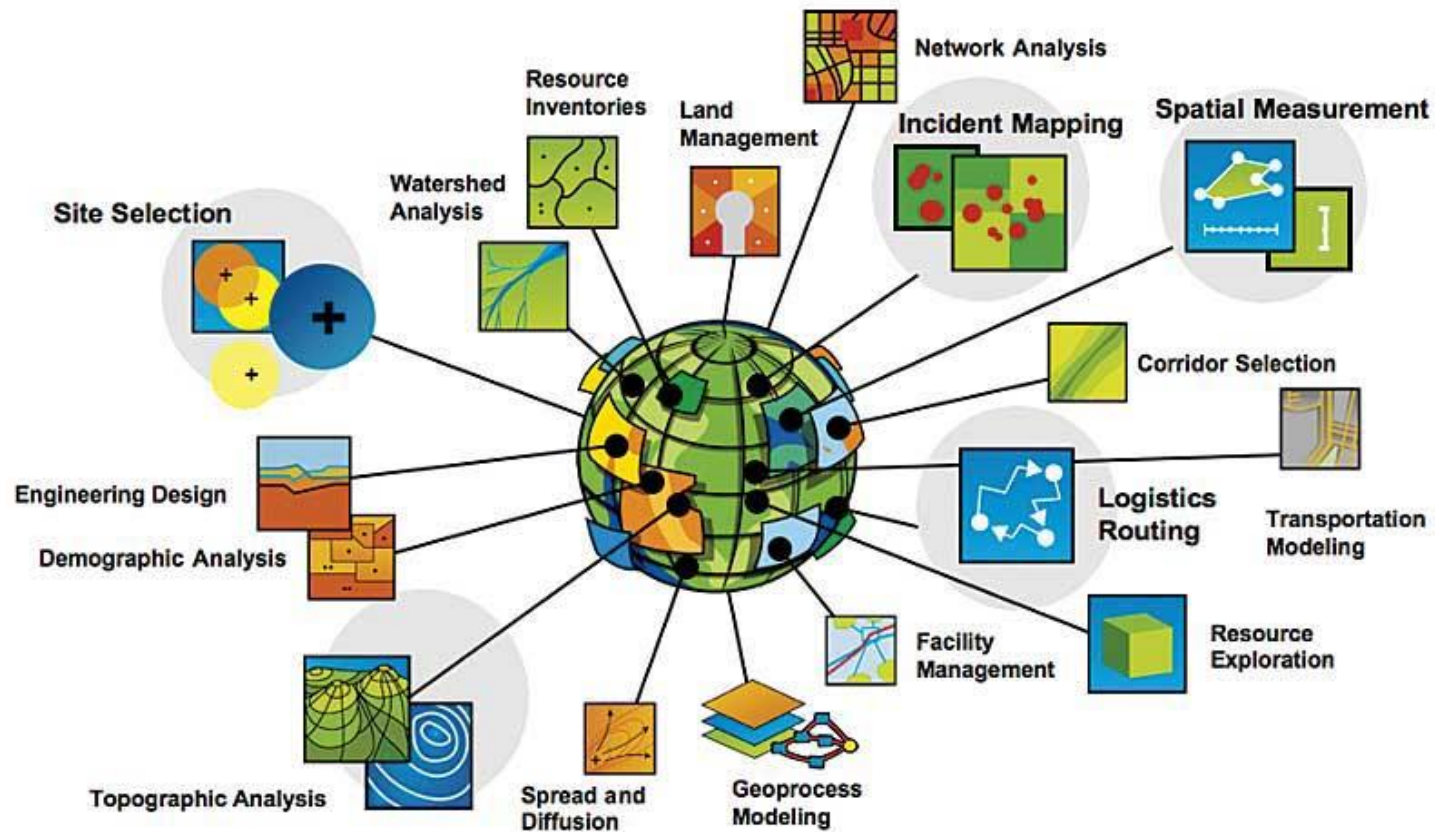
GIS Applications in

- Agriculture and Water Resources
- Water Resources Engineering
- Climate Change

GIS APPLICATIONS

GIS Is Being Applied Around the World

Across Many Disciplines, Professions, and Organizations



Becoming an Instrument of Evolution

COURSE GRADING (CE 3010)

Quizzes from RS → **40 %**

(2 Quizzes, each of 20 % weight)

Quizzes from GIS → **40 %**

(2 Quizzes, each of 20 % weight)

Group Presentation (RS & GIS) → **10 %**

Attendance → **10 %**

Note: Malpractice / Unfair means in any form at any stage will affect the grade

TEXT BOOKS

1) Fundamentals of Remote Sensing

Joseph George (2nd Edition) University Press

2) Introduction to Remote Sensing

James B Campbell (5th Edition) Guilford Press

3) Fundamentals of Geographic Information Systems

Michael N Demers (3rd Edition) Wiley Publishers

Most Importantly

Lecture Material and Class Notes

QUESTIONS ???