

Course Number and Name												
BCE095 - GEOGRAPHICS INFORMATION SYSTEM												
Credits and Contact Hours												
3 & 45												
Course Coordinator's Name												
Dr.S. Buvaneshwari												
Text Books and References												
<p>TEXT BOOKS:</p> <ul style="list-style-type: none"> Anji Reddy .M, "Remote sensing and Geographical information system", B.Publications, 2011. <p>REFERENCES:</p> <ul style="list-style-type: none"> Chester (England), Geo informational System, Application of GIS and Related Spatial Information Technologies – ASTER Publication Co. 1992. Burrough .P.A, "Principles of GIS for Land Resources Assessment", Oxford Publication,2000. Jeffrey Star and Join Estes, "Geographical Information System An Introduction" – Prentice Hall, 1990. 												
Course Description												
<ul style="list-style-type: none"> To introduce the students to the basic concepts and principles of various components of Geographic Information System 												
Prerequisites						Co-requisites						
Remote Sensing and GIS						NIL						
required, elective, or selected elective (as per Table 5-1)												
Course Outcomes (COs)												
CO1	To procure knowledge about History and development of GIS											
CO2	Apply the concept of Data Entry, Storage & Maintenance											
CO3	Apply the concepts of DBMS in GIS											
CO4	Analyze raster and vector data and modeling in GIS											
CO5	Apply GIS in land use, disaster management, ITS and resource information system											
Student Outcomes (SOs) from Criterion 3 covered by this Course												
	COs/SOs	a	b	c	d	e	f	g	h	i	j	k
	CO1	M			H	H				H		
	CO2	M			H	H				H		
	CO3	M			H	H				H		
	CO4	M			H	H				H		
	CO5	M			H	H				H		

List of Topics Covered

UNIT I INTRODUCTION 9

Definition – Map and amp analysis – Automated cartography, History and development of GIS. Hardware requirement -system concepts Coordinate systems - Standard GIS packages.

UNIT II DATA ENTRY, STORAGE & MAINTENANCE 9

Type of data. Spatial and non-spatial data – Data structure – points – Lines – polygon - Vector and raster Files and data formats- Data compression.

UNIT III DATA ANALYSIS OF MODELING 9

Spatial analysis - Data retrieval- Query Simple analysis- Record overlay- vector data analysis-raster data analysis - Modeling in GIS- Digital elevation model- DIM cost and path analysis -Artificial intelligence- Expert system.

UNIT IV DATA OUTPUT & ERROR ANALYSIS 9

Types of output data – Display on screen – Printer – Plotter – Other output devices – Sources of errors – Types of error – Elimination. Accuracies.

UNIT V APPLICATION 9

GIS Application: Application areas – Resources management – Agriculture Soil – Water Resources management – Cadastral records and US – Integrated remote sensing application with GLS – Knowledge based techniques.