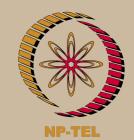
NOC:GIS in Ag-Essentials and Applications (GIS) - Video course

COURSE OUTLINE

Week	Topics	
Week 1	Traditional information in agriculture practices	
Week 2	Creation of georeferenced information base from existing data sets using GIS systems	
Week 3	Understanding of rainfall potential clouds in decision making for irrigation	
Week 4	Water resources availability – surface water from rainfall and ground water assessment	
Week 5	Water demand assessment and deficit	
Week 6	Drought vulnerability and risk assessment – meteorological, hydrological, agricultural	
Week 7	Village level information system and utility – natural resources / socioeconomic aspects	
Week 8	Sustainable village resources management	

COURSE DETAIL

Week	Торіс	Speaker
Week0	Introduction to the Course	Dr. R Nagarajan and Dr. V. Balaji
Week1	Agriculture practices & Use of GIS for Course Correction	
Lect 1	Our Agriculture Practices and Lessons	R Nagarajan
Lect 2	Climate and Scale of Change	R Nagarajan
Lect 3	Course Corrections	R Nagarajan
Lect 4	Modified agriculture Precision agriculture	R Nagarajan
Lect 5	Modified Agriculture Practice Climate Smart Agriculture	R Nagarajan



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Dr. R. Nagarajan Principal Research Scientist CSREIIT Bombay

Dr. Venkataraman Balaji Director,Tech nology & Knowledge ManagementCommon Wealth of Learning, Canada

Week2	Integration of Agriculture Related Information GIS	
Lect 1	Maps and Information in Practice	R Nagarajan
Lect 2	Geographical Information System (GIS)	R Nagarajan
Lect 3	Types of Input	R Nagarajan
Lect 4	Analysis Map Overlay	R Nagarajan
Lect 5	Buffering & Perspective View	R Nagarajan
Lect 6	GIS Type & Available GIS Soft Wares	R Nagarajan
Week3	Village/Land Information System	
Lect 1	Village cadastral map and property card	R Nagarajan
Lect 2	Cadastral maps and contents	R Nagarajan
Lect 3	Creation of Cadastral information base	R Nagarajan
Lect 4	Land information system	R Nagarajan
Lect 5	Creation of village boundary based basin analysis – water management	R Nagarajan
Week4	Weather Cloud reading & rainfall analysis in irrigation schedule	
Lect 1	Needs and Weather forecast	R Nagarajan
Lect 2	Cloud types & rain bearing clouds	R Nagarajan
Lect 3	Weather satellites and cloud pattern reading	R Nagarajan
Lect 4	Rainfall and supplementary irrigation	R Nagarajan
Lect 5	Synergistic use	R Nagarajan

Week5	GIS in estimation of water availability for effective planning	
Lect 1	Surface rainfall run off assessment & model	R Nagarajan
Lect 2	Soil and Water Assessment tools (SWAT) model	R Nagarajan
Lect 3	Groundwater availability	R Nagarajan
Lect 4	Grounwater potential mapping	R Nagarajan
Lect 5	Water storage & water availability and release	R Nagarajan
Lect 6	Growth of crop area in command area and impact climate change	R Nagarajan
Lect 7	Impact of climate on agriculture	R Nagarajan
Week 6	Implications of water availability deficit on agriculture	
Lect 1	Crop water requirement & distribution loss	R Nagarajan
Lect 2	Village agriculture & other water demand and supply source	R Nagarajan
Lect 3	Water security assessment	R Nagarajan
Lect 4	Land degradation: Soil salinity	R Nagarajan
Lect 5	Water logging	R Nagarajan
Lect 6	Water balance under different rainfall	R Nagarajan
Week 7	Drought assessment	
Lect 1	Drought and characteristics	R Nagarajan
Lect 2	Drought vulnerability and risk assessment	R Nagarajan

Monitoring and warning	R Nagarajan	
Drought Monitoring: a global perspective	V. Balaji	
Drought Risk and Vulnerability Assessment: a global perspective	V. Balaji	
Sustainable resources management in Agriculture		
GIS in sustainable agriculture	R Nagarajan	
Assessment of existing water storage structures & rehabilitation	R Nagarajan	
Sustainable Development and Agriculture a confluence of pressures	V. Balaji	
Climate Change and drought a global perspective	V. Balaji	
GIS and Drought Management: a global perspective	V. Balaji	
-	Drought Monitoring: a global perspective Drought Risk and Vulnerability Assessment: a global perspective Sustainable resources management in Agriculture GIS in sustainable agriculture Assessment of existing water storage structures & rehabilitation Sustainable Development and Agriculture a confluence of pressures Climate Change and drought a global perspective	Drought Monitoring: a global perspectiveV. BalajiDrought Risk and Vulnerability Assessment: a global perspectiveV. BalajiSustainable resources management in AgricultureImage: Comparison of the section of the

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