REMOTE SENSING AND GIS

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Department of Civil Engineering
IIT Guwahati

TYPE OF COURSE : Rerun | Core | UG/PG
COURSE DURATION : 8 weeks (20 July'20 - 11 Sep'20)
EXAM DATE : 27 Sep 2020

INTENDED AUDIENCE : PG Students
INDUSTRIES APPLICABLE TO : Rolta India, RMSI Private Limited, ArcGeosystems

COURSE OUTLINE :
This course will introduce the students to the state-of-the-art concepts and practices of remote sensing and GIS. It starts with the fundamentals of remote sensing and GIS and subsequently advanced methods will be covered. This course is designed to give comprehensive understanding on the application of remote sensing and GIS in solving the research problems. Upon completion, the participants should be able to use remote sensing (Satellite images and Field data) and GIS in their future research work.

ABOUT INSTRUCTOR :
Prof. Rishikesh Bharti is a faculty member at the Department of Civil Engineering, Indian Institute of Technology Guwahati. He has been teaching Advanced Remote Sensing, Geohazard Science and Engineering, Advanced Techniques in Geoscience, Engineering Geology to the B.Tech, M.Tech and PhD students at IIT Guwahati. Hydrogeomorphology, Geospatial modelling, Snow and Glacier Studies, Spectroscopy of natural and manmade materials and Advance remote sensing (Hyperspectral and thermal) for the earth and planetary exploration are his major research interests.

COURSE PLAN :
Week 1: Remote Sensing Data and Corrections
Week 2: Satellite Image Corrections
Week 3: Digital Image Processing-I
Week 4: Digital Image Processing-II
Week 5: Thermal and Microwave
Week 6: Imaging Spectroscopy-I
Week 7: Imaging Spectroscopy-II & GIS-I
Week 8: GIS-II and Application