REMOTE SENSING AND GIS

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INTENDED AUDIENCE : B.Tech, M.S., M.S.R., M.Sc., M.Tech., Ph.D. and Professionals

INDUSTRIES APPLICABLE TO : Esri, Rolta India, RMSI Private Limited, ArcGeosystems

COURSE OUTLINE :
This course introduces state-of-the-art concepts and practices in Remote Sensing and GIS. Beginning with fundamental principles, it progresses to advanced methodologies, equipping students with a comprehensive understanding of their application in research problem-solving. Upon completion, participants will be able to effectively utilize remote sensing (satellite imagery and field data) and GIS in their future research endeavors.

ABOUT INSTRUCTOR :
Prof. Rishikesh Bharti, a faculty member in the Department of Civil Engineering at IIT Guwahati, brings expertise in areas such as Advanced Remote Sensing, Geohazard Science and Engineering, Advanced Techniques in Geoscience, and Engineering Geology, which he teaches to B.Tech, M.Tech, and PhD students. His research focuses on the application of geospatial technology in natural hazard studies, Geospatial modelling, and advanced remote sensing techniques for both Earth and planetary studies. He anticipates that participants will find the proposed course engaging and educational. Additional information about his research is available at https://fac.iitg.ac.in/rbharti/.

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