

NINTH COURSE ON APPLICATION OF REMOTE SENSING AND GIS FOR MINERAL EXPLORATION

ANNOUNCEMENT

Geological Survey Of India (GSI) Training Institute, in collaboration with ISRO, proposes to conduct the 9th Course on Application of Remote Sensing and GIS for Mineral Exploration for about 10 weeks from 1st March 2010 to 8th May 2010 at Hyderabad.

I COURSE OVER VIEW: The course will cover six modules viz:

1. Fundamentals of Photogeology and Remote Sensing: Fundamentals of aerial photography, flight planning and execution, photogrammetry, physics of remote sensing, sensors and platforms, various remote sensing data products, and remote sensing in visible, thermal and microwave regions of the Electromagnetic spectrum. Hyperspectral Remote Sensing and its application in mineral exploration. Techniques of interpretation of aerial photos and satellite imagery with a number of case studies.
2. Digital Image Processing: Structure of the digital image, Different data formats, Loading of different satellite images and sub setting, Image Preprocessing, Geometric rectification of the spatial data, Statistical analysis of digital data, Various Image Enhancement (radiometric, spectral and spatial) techniques, Multi band enhancement techniques – including band ratioing, Principal component analysis, RGB – HIS transformation, resolution merge, image fusion; Image classification techniques; Mosaicking and map composition.
3. Digital Photogrammetry: Digital Image Orientation, Aerial and Space Triangulation, Bundle Block adjustment, Epipolar image, generation of digital elevation model (DEM), Ortho photo generation and application, 3D visualization and 3D feature extraction using both aerial photos (stereo-pair) and satellite data.
4. Geographic Information System: General concepts of spatial data models, Introduction to Arc GIS, Spatial data capture techniques, Georeferencing and on screen digitization, Automatic and semi-automatic vectorisation using Arc Scan, Spatial data editing, Geodatabase concepts, concepts of GPS and Mobile mapping, Spatial adjustments, GIS analysis and Modeling techniques, cartographic principles and map layouts.
5. Case histories of application of Remote Sensing and GIS in Mineral Exploration.
6. Block interpretation and field checks.

The training will be imparted using *State-of- the art* Image Processing, Photogrammetry and GIS soft ware.

II. VENUE: GSI Training Institute, Bandlaguda, Hyderabad.

III TARGET GROUP:

1. Faculty of Universities and Research scholars.
2. Geoscientists of State/ Central Govt /PSU
3. Scientists of State Remote Sensing Centers.

The candidates should be postgraduate in Geology/Geography/Geophysics/Geoinformatics or equivalent degree in the relevant field. Participants who are familiar with using Remote Sensing & GIS techniques will be preferred.

IV Course Fee, Scholarship and Accommodation: There is no course fee. Limited fellowships are available. Modest hostel facility is available in the GSI campus.

V APPLICATION FORMAT: Interested candidates may send their application with the following details:

- 1) Name of the sponsoring organization
- 2) Name of the candidate
- 3) Designation
- 4) Sex
- 5) Date of Birth
- 6) Academic qualification
- 7) Area of specialization & professional experience
- 8) Relevance of training to the present job
- 9) Computer background
- 10) Address for communication including e-mail ID, phone number (mobile and land line) and FAX number.

VI Consent letter: This is to recommend and forward the application of Dr/ Shri /Ms _ _ _ _ _ of this Department for the ninth course on "Application of Remote Sensing and GIS for Mineral Exploration " to be conducted by GSI Training Institute Hyderabad, under NNRMS programme sponsored by Indian Space Research Organization from 1st March 2010 to 8th May 2010.

Place:

Date:

(Signature of Sponsoring Authority)

VII: Last date for receipt of applications: 16th January, 2010. Application received after the due date will not be entertained.

VIII. Contact Address: The completed applications may be sent to the Dy. Director General, GSI Training Institute, GSI Complex, Bandlaguda, Hyderabad-5000 068 Attention: Director, PGRS Division. (Ph-040-24220944, 24221679,24220681, Fax: 040-24220680, e-mail: (ddggsiti@gmail.com). For more details please visit the GSI website www.gsi.gov.in and portal www.portal.gsi.gov.in