

Geological Survey of India Training Institute
Mission V
Training and Capacity Building



Expression of Interest for Training requirement and
knowledge sharing

Training Needs Assessment
For
Stakeholders of the Geoscientific Sector
Central and State Government institutions,
Private Sector institutions, Academic and
Research institutions, etc.

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TRAINING NEEDS ASSESSMENT

INTRODUCTION:

The High Powered Committee (HPC) appointed by the Govt. of India to review the functioning of Geological Survey of India accorded a Mission Status to Geological Survey of India Training Institute with the objective of Training and capacity building for the Mineral sector as a whole. The report envisages GSITI to be developed into a 'Centre of Excellence' for providing high quality cutting edge training/knowledge delivery in the country with status of a Degree awarding Institute. It is envisaged that 'capacity building' and 'knowledge sharing' rather than training would perhaps be a better description of what is intended and set out the framework not only in respect of GSI's own resources, but also of other stakeholders of the geoscientific sector - Central and State Government institutions, private sector institutions, academic and research institutions, etc.

The National Mineral Policy 2008 (para 2.7) has also stressed on the need for a comprehensive institutional framework for R&D and Training as follows:-

"To enable the use of state of the art exploration techniques, scientific mining and optimal use of minerals through ore dressing and beneficiation technologies, it is necessary not only to promote research and development in minerals but to simultaneously establish appropriate educational and training facilities for human resources development to meet the manpower requirements of the mineral industry. These matters will receive prime importance and a comprehensive institutional framework for Research & Development, and Training will be developed".

Accordingly, GSITI has adopted the policy of "training for all" in broad conformity with the National Training Policy of Government of India.

TRAINING NEEDS ASSESSMENT:

The need for training and knowledge transfer has assumed critical importance in the present scenario of rapid scientific and technological advances taking place in the field of geosciences. Attendant changes in approach and methodologies especially with the availability of numerous computer based applications have added to the pressure to keep up with latest developments. It is, therefore, imperative to develop a dynamic training policy in consonance with the changing geo-science context, to create the necessary pool of expertise in order to sustain strategic goals to achieve the vision in meeting the gap between academic knowledge and field practices.

Presently the training needs of GSI, and other Institutions to some extent, are met by the Geological Survey of India Training Institute (GSITI). The training institute is capable of providing refresher or capsule courses for in-service geoscientists of GSI and to other earthscience related departments/ organizations/universities in the country but also to function as an internationally reputed training facility for private sector and geoscientists from other countries as well.

Although considerable interaction exists between the academia and the institute particularly so in the advanced training programmes, no regular exchange programme is being attempted now for which suitable policy changes are needed.

By throwing the facilities and capabilities open the institute has embarked on the programme of capacity building in the field of geoscience to raise the bar of the students, research scholars, faculty from universities and to officers of various State/Central Government, private sector departments and also can devise customized assignments,

For the training to be effective and efficient, the training needs assessment is a critical activity for the training and development function. Accordingly, the Training Needs Assessment (TNA) of the mineral sector including the Central Government Organizations, State DGMs., Public and Private Sector Organizations and Industries needs to be assessed and planned keeping in view the following:

- Organization, its goals and objectives,
- Jobs and relative tasks need to be learned
- Competency and skills needed to perform the job
- Individuals/Groups who are to be trained

Therefore, the Stake-holders are requested to assess their training requirements and also to indicate areas of knowledge sharing for the benefit of one and all. They are requested to keep following Training objectives in view while forwarding their organization training requirements:

1) A gap between what is currently in place and what is needed, now and in the future.

Gaps can include discrepancies/differences between:

- What the organization expects to happen and what actually happens.
- Current and desired job performance.
- Existing and desired competency and skills.

2) Who, if anyone, needs training and

3) What training is needed?

Training Needs Assessment Proforma is enclosed. The proforma can also be downloaded from GSI Portal: www.portal.gsi.gov.in.

TRAINING COURSES OFFERED BY THE GSITI

| Sl no. | Course | Code |
|----------|---|------------|
| A | INDUCTION COURSES | |
| 1 | Orientation course for Geologists | A1 |
| 2 | Orientation course for Geophysicists | A2 |
| 3 | Orientation course for Chemists | A3 |
| B | BASIC COURSES | |
| 1 | Marine Geology | B1 |
| 2 | Paleontology | B2 |
| 3 | Engineering Geology | B3 |
| 4 | Geothermal phenomena and related studies | B4 |
| 5 | Glaciological Studies | B5 |
| 6 | Principles and practices of Quaternary Geological studies | B6 |
| 7 | Drilling course for Jr. Drilling Technicians | B7 |
| 8 | Geological Health Hazards | B8 |
| 9 | Geological Mapping in Sedimentary terrain and coal exploration techniques | B9 |
| 10 | Mineral Physics | B10 |
| 11 | Applied aspects of Physico – mechanical properties of rocks & soils | B11 |
| 12 | Digitisation & Data Entry | B12 |
| 13 | Geographic Information Systems | B13 |
| 14 | Mobile Mapping & Geochemical Data handling | B14 |
| C | REFRESHER COURSES | |
| 1 | Remote Sensing & DIPS | C1 |
| 2 | Exploration for Gold | C2 |
| 3 | Exploration for Diamonds | C3 |
| 4 | Micro-vertebrates and vertebrate paleontology | C4 |
| 5 | Micropaleontology – Foraminifera and Ostracoda | C5 |
| 6 | Quaternary Paleontology and their role in Environmental Geology | C6 |
| 7 | Geothermal investigation | C7 |

| | | |
|----------|---|-----|
| 8 | Principles and practices in Petrological Laboratory Techniques | C8 |
| 9 | Statistical Methods in Mineral Exploration | C9 |
| 10 | Drilling techniques for Geothermal Energy | C10 |
| 11 | Integration of surface & sub-surface data for understanding history of sedimentation, structural evolution and development of coal in Gondwana basin | C11 |
| 12 | Gem Testing | C12 |
| 13 | Environmental Geochemistry | C13 |
| 14 | Sedimentology | C14 |
| 15 | Exploration Geochemistry | C15 |
| 16 | Geochemical Exploration | C16 |
| 17 | Deccan Trap Mapping | C17 |
| 18 | Seismotectonics & Earthquake Engineering | C18 |
| 19 | Structural Mapping | C19 |
| 20 | Environmental Geology, Quaternary Geology & Geomorphology | C20 |
| 21 | Drilling Technology for Drillers | C21 |
| 22 | Geohazard Management | C22 |
| 23 | Ore Microscopy and Fluid Inclusion Studies | C23 |
| 24 | Himalayan Geology | C24 |
| 25 | Seismic Microzonation Studies of Urban areas | C25 |
| 26 | Field guidelines on UNFC Mineral Resource Estimation in India | C26 |
| 27 | Course on XRF & Gas Chromatograph- Modern Instrumental Methods of analysis | C27 |
| 28 | Course on ICP-AES & ICP-MS- Modern Instrumental Methods of analysis | C28 |
| 29 | Course on AAS & Fire Assay -Modern Instrumental Methods of analysis | C29 |
| 30 | Geochemical data handling, interpretation & preparation of geochemical maps | C30 |
| 31 | Mud technology in drilling operations | C31 |
| 32 | Exploration for bedded deposits | C32 |
| D | ADVANCED COURSES | |
| 1 | Geochemistry in Igneous Petrogenesis | D1 |
| 2 | Course on Metamorphic Petrology | D2 |
| 3 | Geophysical data processing | D3 |
| 4 | Active Fault Studies | D4 |
| 5 | Geostatistics for Geoscientists | D5 |
| 6 | Landslide Hazard Zonation Mapping – site specification studies | D6 |
| 7 | Glaciology | D7 |
| 8 | Determination of gold & platinum group of elements using state of the art techniques | D8 |
| 9 | Course in XRF techniques of elemental analysis | D9 |
| 10 | Course in IC, DSMA, GC-MS and TOC analyser | D10 |
| 11 | Course in coal petrography, including study of detailed petrographic composition , fluorescence, scanning micro cleat analysis of coal and lignite and rank determination | D11 |
| 12 | Geo-archaeology | D12 |
| 13 | Palaeoclimate & climate change | D13 |
| 14 | Prospectivity Mapping - Advance GIS1 | D14 |
| 15 | Course on Internet – Advance GIS | D15 |
| 16 | Application of high resolution Imagery for landslide inventory, hazard & risk assessment | D16 |

Note: GSI TI conducts tailor made courses for organisations on request.

**Geological Survey of India,
Training Institute
Hyderabad
PROFORMA
TRAINING NEEDS ASSESSMENT**

| | |
|--|--|
| 1. Name of the Organisation : | |
| 2. Head of the Organisation : | |
| 3. Address : Phone/ Fax/ e-mail | |
| 4. Organisation Goal and Objectives: (separate sheet be used,,if required) | |
| 5. Total Earth science resource personnel: | |

| 6. Major Activity: | ACTIVITY | Personnel Engaged | Trainings received | Trainings required / CODE |
|--------------------|----------|-------------------|--------------------|---------------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

| 7. Minor Activity: | ACTIVITY | Personnel Engaged | Trainings received | Trainings required / CODE |
|--------------------|----------|-------------------|--------------------|---------------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

| 8. Supporting Activity | ACTIVITY | Personnel Engaged | Trainings received | Trainings required / CODE |
|------------------------|----------|-------------------|--------------------|---------------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

Example: In case of GSI

Major Activity: Geological Mapping, Mineral Exploration, Landslide Hazard Zonation, etc.

Minor Activity: Environmental Geology, Geohydrology, etc.

Supporting Activity: Database Creation, Surveying, Drilling, etc.

Knowledge sharing: You may also indicate the knowledge your Organisation which you would like to share with other stake holders.

The completed form may kindly be mailed to hod.gsiti@gsi.gov.in or ddggsiti@gmail.com on or before 20-11-2009 to Deputy Director General, Training Institute, Bandlaguda Complex, Hyderabad-500 068 so that the data can be processed and placed before the Training Policy Coordination Committee (TPCC) scheduled to be held in the month of December 2009, under the Chairmanship of Secretary , Ministry of Mines.

Some of the training courses conducted by the GSITI are tabulated in the training courses offered for reference. If any of the courses are suitable to your organization you may chose the course and indicate the code.

Date:

Place:

Signature

Name;

Designation

Seal:

Contact address:

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