ADVERTISEMENT

for

Admission in Six (6) Months Certificate Course in

Applied Remote Sensing & GIS

Jointly organised by

National Atlas and Thematic Mapping Organisation (NATMO), Govt. of India

&

South Asian Institute for Advanced Research and Development (SAIARD)

at

National Atlas and Thematic Mapping Organisation (NATMO), Salt Lake, C.G.O. Complex, Kolkata

Course Details		
Course Duration	6 Months	
Total Course Hours	216 Hrs.	
Session	July to December	
Course Fees	**For General Candidates**	**For Sponsored Candidates**
	20000/-	25000/-
Intake Capacity (per batch)	45	
Class Timing	**Batch-I**	**Batch-II**
	Morning Session	**Afternoon Session**
	Thursday, Friday, Saturday	Thursday, Friday, Saturday
	(10:00 a.m.-1:00 p.m.)	(2:00 p.m.- 5:00 p.m.)
Eligibility	B.A./B.Sc./M.A./M.Sc. /B.Tech. /M.Tech./ B.E. / A.M.I.E./B.C.A. / M.C.A. Students/ Faculties in any University/College/Research Institution/Govt. Officials/Corporates. Candidates having knowledge in basic Computer Operating System will get an extra preference.	
Examination	Yes	
Full Marks of Examination	100	
Certificate	Certificate will be provided jointly by SAIARD & NATMO	

Format and Timeline of Application

Sl. No.	Content	Deadline
1	Last Date of Submission of Application Form along with the Latest Original Mark Sheet Or Certificate, One Recent Passport Size Photo, Aadhar Card in the given Email Id i.e. **saiardcbp6@gmail.com**	**15th June, 2019**
2	List of the Shortlisted Candidates will be Uploaded on the Websites	**17th June, 2019**
3	Last Date of Submission of Fees in the Given Bank Account	**20th June, 2019**
4	Last Date of Submission of Hardcopy of Application Form & Transaction slip at NATMO, C.G.O. Complex (7th Floor), Salt Lake, Kolkata office between 12:00 - 4:00 p.m.	**24th June, 2019**

Bank Details

Name of the Bank	**State Bank of India**
Branch	**Baghajatin Station Road Branch**
Branch Code	**016629**
Beneficiary A/C Name	**South Asian Institute for Advanced Research and Development**
Account Type	**Current Account**
A/C No	**38377901244**
IFSC Code	**SBIN0016629**
MICR	**700002450**

*** *Once registered, candidates have to complete this course till end and at least 80% attendance is compulsory to get the certificate. Leaving without completing the course will consider disqualification of his/her candidature and he/she couldn't claim any refund or certificate against his/her decision.*

Admission Form

Six (6) Months Certificate Course on Applied Remote Sensing & GIS

Batch- I/II

Paste a recent Stamp size photographs here

- **Name:**
- **Latest Qualification:**
- **Designation:**
- **Affiliating Institution:**
- **Postal Address:**
- **State / Province:**
- **Country:**
- **Sponsored/General:**
- **Contact No.:**
- **Email:**
- **Aadhar No.:**
- **Bank Name :**
- **Amount:**
- **Transaction No. :**
- **Date:**

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Signature of the Candidate with Date

For Details

Mobile: 6289169916/9883629435/9027648321/9831090094

Email: saiardkolkata@gmail.com; dir.natmo@nic.in

Course Contents

Classes	Topic
	Geographical Information Systems
1	Overview Of GIS: Introduction To GIS, Definition Of GIS, Components Of GIS, Functions And Advantages Of GIS, Application Areas
2	Spatial Data Model: Dimensions Of GIS Data, Conceptual (Field/Object) And Logical (Raster/Vector/Object Oriented)
3	Concepts On Co-Ordinate System: Map, Scale, Coordinate Systems, Sphere/Spheroid, Datum, Projection, Projection Parameters
4	Process Of GIS: Data Sources, Data Capture (Raster/Vector/Attribute), Raster And Vector Data Processing
	Quantum GIS
5	Introduction To Quantum GIS: Interface & Plugins Concepts, Raster Handling/Processing
6	Practical
7	Image Georeferencing, Projection
8	Practical
9	Vector Creation, Vector Editing, Attribute & Spatial Query, Area/Perimeter/Length Extraction From Features, Field Calculation, Label Etc.
10	Practical
11	Import CSV File, Coordinate Extraction, Join External File With Vector Layer, Projection Transformation, Geoprocessing, Etc.
12	Practical
13	Creation Of Thematic Map, Layout Generation
14	Practical
15	**Special Lecture**
	Remote Sensing
16	Concept On Remote Sensing: Definition, Data (In Situ / Remote Sensing), Remote Sensing Process, EMR Spectrum And Its Properties
17	Concept Of Resolutions: Spectral, Spatial, Temporal, Radiometric; Digital Optical Imaging: Digital Image, Sensor, Detector, Image Acquisition, PAN, Multispectral,Hyperspectral, Digital Camera
18	Fundamentals Of Aerial Photography, Vertical And Oblique, Aerial Cameras, Photogrammetry; Basic Concepts Of Scale, Object Height And Length, Object Area And Perimeter, Gray Scale Tone/Colour Of Objects, Photo Interpretation Techniques, Stereo Photogrammetry And Stereovision, Parallax Bar And Its Applications.
19	Photographic System: Cameras, Sensor Classification: Active And Passive, Along Track And Across Track Scanners, Infrared Scanners, Thermal Sensors And Microwave Sensors, Orbits, Swath, Nadir, Sensor Resolutions, Image Referencing System, Orbital Calendar
20	Spectral Signature And Its Response: Of Soil, Vegetation And Water, Basics Of Visual Interpretation Of Satellite Images, Hyper-Spectral Remote Sensing
21	**Special Lecture**
22	Image Classification In Q GIS
23	Practical
24	Spatial Analysis (Contour, Slope, Aspect, Hill Shade Using Dem), Proximity Analysis, Geoprocessing, Interpolation (IDW/TIN) Based On Vector Layer Etc. Contour Creation In Different Value, Surface Analysis, Hill Shade, View Shed
25	Practical
	Arc GIS
26	Introduction To Arc GIS
27	Georeferencing , Projection
28	Practical

29	Shape File Creation, Editing, Advance Editing,
30	Practical
31	Creation Of Database, Concept Of Attribute Data & Spatialdata,External Database Attachment,Quary:Spatial Query, Attribute Query, Model Building
32	Practical
33	Geodatabase Design,(Generation/Editing), Topology
34	Practical
35	Add XY Data, External Data Attachment, Create Relationship, Query
36	Practical
37	Thematic Map, Layout Generation, Annotation
38	Practical
39	**Special Lecture**
40	Geoprocessing, Arc Scan: Automated R2V Conversion
41	Practical
42	Surface Model and Surface Analysis, Virtual Environment, Raster Algebra, Zonal Statistics, Surface Interpolation; TIN/DEM Creation, Slope/Aspect, Hill Shade, View Shed, 3D Model,
43	Practical
44	Spatial Analysis: Site Suitability Analysis, Shortest Path Analysis, Animation In Arc Map, Import/Export
45	Practical
46	Concept & Implementation Interpolation & Creation Of DEM : Inverse Distance Weighted, Spline, Kriging,Natural,Natural Neighbour , Animation In Arcmap, Import/Export
47	Practical
48	Digital Image Processing And Enhancement, Atmospheric Correction, Mosaic, Fusion, Layer Stacking
49	Practical
50	Digital Image Processing (Classification):Information Class, Spectral Class, Supervised Vs. Unsupervised, Decision Rules For Unsupervised Classification
51	Practical
52	**Special Lecture**
53	Hydrological Analysis Using Digital Elevation Model, From Concept To Implement: Correction & Rectification of DEM,Calculation Of Flow Direction ,Flow Accumulation, Identification Of Stream With DEM Interpretation ,Stream Order, Basin Area Identification
54	Practical
55	Introduction, Concept Of GNSS Technology, Three Segments Of GNSS, Timing And Ranging, Calculating Location, Errors, Differential GNSS, Applications
56 - 57	Practical And Field Survey
58 - 62	Internship/Project Work
63 - 65	Classes Off For Examination
66	Examination (Theory + Practical)
67	Project Report Submission And Presentation
68 - 70	Result Published + Marks Upload
71 - 72	Mark Sheet + Certificate Distribution