



**North East Centre For Technology Application & Reach  
(NECTAR)**

**Autonomous Body Under Department of  
Science & Technology, Government of  
India**

<https://www.nectar.org.in/>

#### **Program:**

Capacity Building on Geoinformatics, Geomatics & Geospatial Technology (including drone technology) applications for NER by NECTAR.

#### **About NECTAR:**

NECTAR is an autonomous society, set up under the Department of Science & Technology, Government of India with its headquarters at Shillong, Meghalaya. The centre will look at harnessing and leveraging niche frontier technologies available with central scientific departments and institutions. To assist the North-Eastern region, NECTAR will be ensuring applications of appropriate technologies for development in the

areas of biodiversity concerns, watershed management, telemedicine, horticulture, infrastructure planning & development, planning and monitoring, and tele-schooling using cutting-edge MESHNET solutions, employment generation, etc. through the utilization of local resources and associated skill development.

#### **About the Program:**

North Eastern Region is always posing challenges for mapping and assessment of endowed natural resources and environment including disaster emergency response measures. Majorly, covered with forest and being hilly and inaccessible terrain, mapping through conventional methods and technologies is realized as a bottleneck in the process. Realizing the need for the technology innovations in the sector, a significant pool of resources needs to be trained on the use and application of innovative geospatial technologies in various sectors including Skill Development and Training in Drone Pilot Licensing, Drone assembling/manufacturing, data acquisition, and processing for high-resolution mapping of NER states. The training and capacity building for North Eastern students/professionals through hands-on exercise on emerging GIS & Remote sensing tools with field survey exposure is essential to leverage the open & promotional geospatial and Drone mapping policy unfolded by Govt. of India. It will create a conducive ecosystem for the people of the region to become "Atmanirbhar North East".

NECTAR is planning to launch training and skill development programs on Geospatial Technology at its HQ in Shillong, Temporary Techno Demo Centre (TTDC) on the campus of Assam Science Society, Guwahati, and on the premises of Bamboo and Cane Development Institute (BCDI) Agartala to cater

participants from all over NER. Also, NECTAR plans to launch a Drone technology and DGPS/GPS survey learning platform through Industry Partners in their different project locations spreading all over India. This process involving Students & young unemployed youths of NER with in-house Geospatial Projects and drone flying, data processing, and surveying projects of various industry partners, for high accuracy mapping products, is one of the core objectives of these programs.

Students/unemployed youths shall be engaged in the customised module of trainings for a minimum of 2-4 weeks time as per their availability. The location of the training conducted will be at various offices of NECTAR (Shillong, Guwahati, Agartala) and at various off-campus project locations executed at the pan India level through NECTAR and its Industry partners.

The candidates will be selected by nominations/applications received through advertisements followed by their proficiency in the subject matter. The successful candidates shall be given job opportunity through NECTAR inhouse projects or Industry partners.

#### **Goal:**

To train and build students from North East India into professional resource persons with the Introduction to Geospatial Technologies including Drones/UAV technology and its usage in various applications and produce drone pilots from DGCA authorised RPTOs to cater the growing demand of Drone Pilots.

#### **Objectives:**

- Providing Skill based training to the Youth of North East to enhance Skill and Development in the area of Geospatial application technology and drone pilots in India as per current Scenario.
- To expand drone pilot certification to youths to reduce un-employability.
- To impart the basics of Geospatial technologies to students and build them into professional experts in this field as GIS has applications in almost every department and facets of development.

### Program categories:

Four categories are designed as below:

<b>Program Modules And Venue</b>	<b>MODULE-I- Remote Pilot Certification &amp; Licensing (RPCL):</b> 5 days training on drone training organized by DGCA Authorised RPTOs in association with NECTAR. Venue: Jawaharlal Nehru College, Boko, Kamrup, Assam
	<b>MODULE-II-Drone Awareness Training Program (DAT):</b> 5 days training on drone technology awareness by I-Hub Foundation for Cobotics (IHFC)- IIT Delhi in association with NECTAR. Venue: NECTAR Techno-Demonstration Centre (TDC), Khanapara, Guwahati
	<b>MODULE III- Drone Data Acquisition &amp; Processing (DDAP):</b> 5 Days full-time classroom-based training on Drone Data acquisition and Processing in various applications. Venue: NECTAR Techno-Demonstration Centre (TDC), Khanapara, Guwahati

<b>MODULE IV- Basics of GIS &amp; Remote Sensing (GISRS):</b> 10 days of full-time classroom-based training on Application of Remote Sensing and GIS. Venue: NECTAR Techno-Demonstration Centre (TDC), Khanapara, Guwahati				
<b>Eligibility</b>				
<b>Module-I (RPCL)</b>	<b>Modul-II (DAT)</b>	<b>Modul-III (DDAP)</b>	<b>Module- IV (GISRS)</b>	
10 <sup>th</sup> class onwards, undergraduates	10 <sup>th</sup> class onwards, undergraduates	Undergraduate - Engineering/ Geoinformatics / Geography/ Geology and allied subjects.	Undergraduate - Engineering/ Geoinformatics / Geography /Geology and allied subjects.	
<b>Tentative Schedule of the Training</b>				
8 <sup>th</sup> – 12 <sup>th</sup> May 2023	10 <sup>th</sup> -14 <sup>th</sup> Apr 2023	17 <sup>th</sup> – 21 <sup>st</sup> April 2023	21 <sup>st</sup> April - 5 <sup>th</sup> May 2023	
Next batches shall be scheduled as per the number of applications received and /or during summer and winter vacations.				
<b>Modules</b>	<b>Module-I</b>	<b>Module -II</b>	<b>Module-III</b>	<b>Module-IV</b>
<b>Registration Fees</b>	Rs 250/-	Rs250/-	Rs 250/-	Rs 250/-
<b>Course fees</b>	Rs 55000/-	Rs 6500/-	Rs. 2500/-	Rs. 3500/-
<b>How to Apply &amp; Selection procedure</b>	Forward their CV to the Course coordinator or through the NECTAR web portal via link or email id. Along with details duly filled in the prescribed application format should also be enclosed. Selection shall be done purely on merit basis on qualification and interaction with the screening committee at suitable level and availability of vacancies.			
<b>Job Opportunities/ Assurance</b>	Successful candidates shall be given opportunity to be engaged in NECTAR in house projects/training facility/on site Projects of Industry partners located at various campus locations of the Centre and/or off campus locations (on pan India level) project sites of			

Industry Partners. The engagement shall be decided during the screening process.

### Term & conditions:

1. Scholarships will be given to deserving candidates as per Norms.
2. The registration fees shall be paid to in the form of Demand Draft in favour of North East Centre for Technology Application and Reach (NECTAR) payable at Shillong/Delhi. The registration fee paid is non-refundable unless until the cancellation of modules.
3. The working time of the training would be 9:00 AM to 5:30 PM (1-hour lunch), daily from Monday to Friday.
4. The candidates shall be arranged non-AC accommodation on twin sharing basis in the proximity areas of the venue/ location as per requirement/request on payment basis.
5. Arrangements for Breakfast, Lunch & Dinner will be there on payment basis.
6. The candidates shall be provided a technical training participation certificate after the successful completion of the Training.
7. The registration fee shall be paid for each module if applied for more than one module.
8. Last date to apply for the all the module would be one week before the commence of each module.
9. NECTAR has all rights to cancel, reject and postpone the programs and any other terms and condition without notice to candidates. The decision shall be intimated before the engagement.

**How to Register:** The duly completed applications as per the below mentioned format, registration fee paid (as per the number of modules) acknowledgement receipt along with CV may be submitted to following email id: [nectartraining@nectar.org.in](mailto:nectartraining@nectar.org.in)

**COURSE MODULEs**

**MODULE-I- Remote Pilot Certification & Licensing (RPCL)**  
**5 days as per DGCA guidelines:** As per DGCA guidelines, a recent drone pilot needs to undergo 5 days (min) training from any of the authorized RPTO. Therefore, the present proposal constitutes 5 days schedule with practical and theory sessions applicable/authorized standard of DGCA.

**MODULE-II-Drone Awareness Training Program (DAT)**  
**2 Days Program**

Day1: UAV/Drone Basics & Applications, Glider Fabrication, Balancing & Testing.  
 Day2: Drone Simulator, Drone Configurations, FPV Systems, Drone Application Sensors.

**5 Days Program**

Day1: UAV/Drone Basics & Applications, Glider Fabrication, Balancing & Testing.  
 Day2: Drone Simulator, Drone Configurations, FPV Systems, Drone Application Sensors.  
 Day3: Drone Avionics Components Introduction, Components Assembling (Quadcopter).  
 Day4: Programming, Calibration, Gaining of Flight Controller, Drone Testing & Flying, Drone Simulator Training.  
 Day5: UAV/Drone Testing Methods, Drone Intelligent Mode. Career Opportunity in Drone Field.

**MODULE III- Drone Data Acquisition & Processing (DDAP)**

Day 1 - UAV Photogrammetry and Remote Sensing Principles  
 Day 2 - Organisations, DGCA, digital sky portal and Legal Aspects of Drone flying.  
 Day 3- Physics of UAV  
 Day 4 - Flight planning, data acquisition and Geotagging of data (Demo/Practical)  
 Day 5 - UAV Data processing (DTM, DSM, Ortho mosaic, point cloud generation)

**MODULE IV – Basic of GIS and Remote Sensing (GISRS)**

Day 1- Basics of GIS  
 Day 2 – Basics of Remote Sensing  
 Day 3- Basics of Digital Image Processing  
 Day 4 – Basics of Image Classification  
 Day 5- Map making and Cartography.  
 Day 6 – Field Data Collection and Processing

Day 7-10 – Case Study(Erdas Imagine/ArcGis/Qgis based)

**Course Coordinator:**

Sattyam (Junior Geomatic Officer)  
 Email: [sattyam@nectar.org.in](mailto:sattyam@nectar.org.in)

**Course Supervisor:**

Roshni Rai (Project Associate)  
 Email: [nectartraining@nectar.org.in](mailto:nectartraining@nectar.org.in)



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**Application Format for Geospatial Training Modules in NECTAR**

(To be completed by the APPLICANT – Please fill in with CAPITAL letters only)

- Select one or more Modules to undertake(Please check the schedule, Course Fee and syllabus before application and availability):
  - Module 1 (Remote Pilot Certification & Licensing (RPCL))
  - Module 2 (Drone Awareness Training Program (DAT))
  - Module 3 (Drone Data Acquisition & Processing (DDAP))
  - Module 4 (Basics of GIS &Remote Sensing (GISRS))
- Applicant's name as per the matriculation certificate mark sheet
- Address for communication: .....
- Permanent address: .....
- Email ID: .....
- Mobile: ..... Alternate number: .....
- Gender: Male/Female
- Social Status: SEBC/OBC/SC/ST/General
- Weather the candidate is belongs to North East Region state Domicile: Yes/No

Paste	Recent
passport	size
Photographs	signed
across.	

(Strike out which is not applicable)

10. Academic detail:

Sl. No.	Name of School/Institute attended	Exam passed	Year of passing	Subjects	Class/Division	% of marks

- Registration Fee Paid: Yes -[Transaction Id: (attach acknowledgement receipt.)
- Declaration:

I ..... undertake that the information furnished above is correct and best of my knowledge and I am willing to undertake the above-mentioned training program(s)/modules as per the terms of NECTAR.

- Please attach copies of photo identity proof, proof of social status, educational certificates/documents and CV with this application form.

Signature

Place:

Date:

Forward the completed application along with supporting documents via email (Signed Scanned Copy) @ [nectartraining@nectar.org.in](mailto:nectartraining@nectar.org.in) or by Post to NECTAR Office at Survey of India Campus, Bonnie Brae Estate, Barik Point, Shillong, and Meghalaya-793001.