

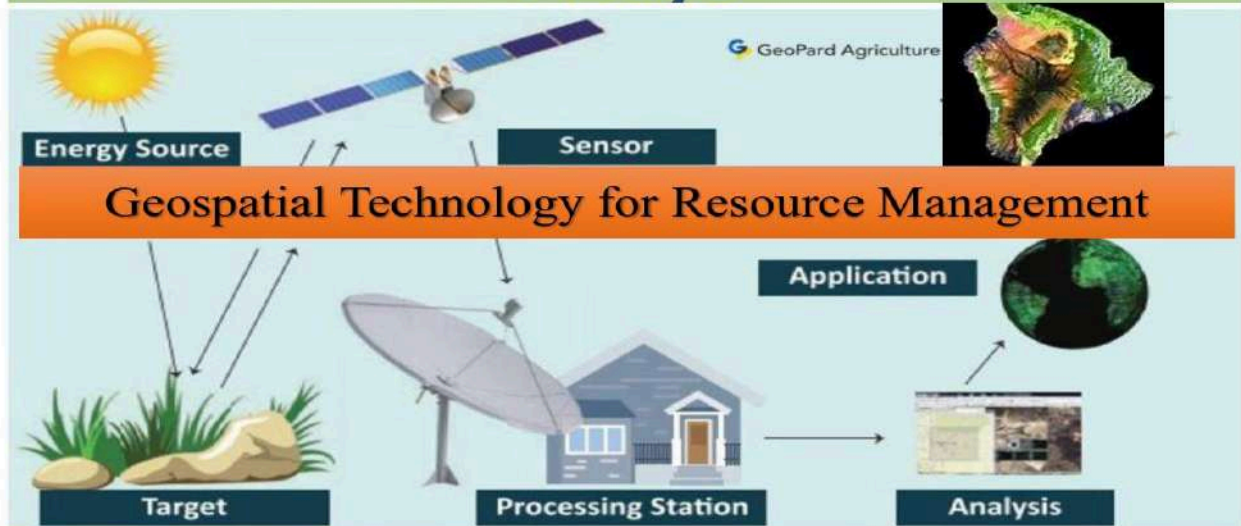
ATR

On

Internship on Geospatial Technology for Resource Management, 2025
Brochure:

Job Oriented Internship Programme

7 Days



Organised by
Department of Geography
GOUR MAHAVIDYALAYA

- **BASIC TO ADVANCE GIS**
Georeferencing, Defining Projection, Vector file (Shape file) creation and editing, Layout Generation and Thematic Map Output
- **DATABASE MANAGEMENT**
Attribute data and spatial data, database creation and attaching external database, Queries & Geoprocessing, Surface models
- **REMOTE SENSING**
Digital Image Processing, Mosaicing and Layer Stacking, Image Classification
- **HYDROLOGICAL ANALYSIS**
DEM, Flow Direction, Flow Accumulation, Stream Identification, Basin Area Identification
- **GPS**
- **FIELD PROJECTS**



INFORMATION TECHNOLOGY SOLUTIONS

A **Job-Oriented GIS Internship Program** is crucial for students and professionals looking to build a career in **Geospatial Technology** and **Resource Management**. This specialized internship provides hands-on experience with **GIS software, Resource Mapping, Watershed Analysis, flood mapping, and Environmental Monitoring**. It enhances technical skills in **spatial analysis, remote sensing, and data visualization**, making participants industry-ready. The program also improves employability by offering **practical exposure to real-world projects**, networking opportunities, and certifications valued by government agencies, environmental consultancies, and research organizations.

- **KEY HIGHLIGHTS**
- Basic to Advance GIS using Q-GIS
- Hands-on Training of GIS software
- Project based Activity
- Real World Application of Remote Sensing Mapping
- Basics of Drone Based Remote-Sensing
- Hydro GIS using SONAR

BLENDED MODE

8 June to 16 June, 2025



GeoTech Solutions
Collaboration

Registration Fees: INR 500 Intake Capacity: 80

REGISTER HERE

Carry Your Laptop if Available for Better Practice

Mangalbari, Malda, 732142

Contact: gmgeointernship2025@gmail.com

WWW.GOURMAHA.AC.IN

Syllabus of the Internship

INTERNSHIP FOR STUDENTS

ARC GIS/Q GIS	
	Introduction to GIS Software
	Georeferencing (image to image, image to ground), projection
	Shapefile Creation, editing, Advance editing, Automatic digitization
	Creation of database, concept of attribute data & spatial data, external database attachment, query: spatial query, attribute query, model building
	Geodatabase design, (generation/editing), Topology
	Add XY data, external data attachment, create relationship query
	Thematic map, Layout generation, Annotation
	Geoprocessing: Buffer, Intersect, Union, Clip
	Surface model and surface analysis, Virtual environment, raster algebra, zonal statistics, surface interpolation; TIN/DEM creation, slope/aspect, hill shade, view shed, 3D model,
	Spatial analysis: Suitable site finding, shortest path analysis, animation in Arc Map, Import/Export
	Concept & implementation of interpolation & creation of DEM : inverse distance weighted (IDW), spline, kriging, natural neighbor, Animation in ArcMap, Import/Export
	Digital image processing and enhancement, Atmospheric Correction, Mosaic, Fusion, layer Stacking
	Digital Image Processing (Classification): Information class, spectral class, supervised vs. unsupervised, decision rules for unsupervised classification
	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
	Introduction, concept of GNSS technology, three segments of GNSS, timing and ranging, calculating location, errors, differential GNSS, applications
Field Study Hydro GIS Application	Application of Active Remote Sensing With SONAR Sensor Under Water Mapping (Sound Navigation & Mapping)
	River Bed Depth Measurement , River Bed Profile Mapping ,Cross Profile & Long Profile, Soil Salinity Zonation Mapping, Water Salinity Zonation Mapping, Drone Survey & Mapping, Bathymetric Mapping
Field Study Drone Mapping GPS Application	GPS Survey
	Introduction, concept of GNSS technology, three segments of GNSS, timing and ranging, calculating location, errors, differential GNSS, applications ,Field Survey & Mapping With GPS
	Drone Mapping
	Mangrove Plantation and Drone Mapping for Orthorectified Image Creation & Understanding of Photogrammetry

GAIN EXPERIENCE IN: GIS & MAPPING • REMOTE SENSING SPATIAL ANALYSIS

Brief Schedule

Day-1: 08/06/2025-	Online Theoretical
Day-2-3: 10/06/25 to 11/06/25:	Laboratory Practical
Day-4: 12/06/2025:	Field based Practical
Day-5: 13/06/2025:	Processing of Field Data in Lab
Day-6-7: 14/06/25 to 16/06/25:	Post Field Works and Report Preparation

Concept Note

The Department of Geography, Gour Mahavidyalaya, Malda, is organising a one-week Internship Programme on "*Geospatial Technologies for Resource Management*". This programme aims to provide hands-on training in GIS, remote sensing, and GPS applications for sustainable resource planning and management. It will include practical sessions, field-based data collection, and geospatial analysis using open-source tools. Designed for students and early-career researchers, the internship will enhance technical skills and promote interdisciplinary learning. Experts from academia and industry will facilitate the sessions, offering valuable exposure to emerging trends in geospatial science and its real-world applications.

Objectives of the Programme:

1. To introduce participants to the fundamentals of geospatial technologies, including GIS, remote sensing, and GPS.
2. To develop practical skills in spatial data collection, processing, and analysis using open-source geospatial software.
3. To enhance understanding of the application of geospatial tools in natural resource management and planning.
4. To promote interdisciplinary approaches in addressing environmental and developmental challenges through geospatial techniques.
5. To provide hands-on experience through fieldwork and project-based learning.
6. To encourage academic-industry interaction by involving experts and professionals in geospatial science.
7. To build capacity among students for pursuing careers or research in geospatial and environmental domains.

Outcome of the events

The one-week Internship Programme on "*Geospatial Technologies for Resource Management*" received highly positive feedback from participants, affirming its success in achieving its academic and skill-building objectives. Participants found the programme particularly valuable for its strong emphasis on practical exposure. Hands-on sessions involving real-world geospatial data, field-based learning, drone handling, and GIS applications significantly deepened their technical understanding and application-oriented skills.

The immersive fieldwork component was especially impactful, helping students bridge the gap between theoretical knowledge and real-world environmental analysis. Collaborative projects and group discussions also enhanced critical thinking, communication, and teamwork skills.

Feedback further highlighted the dedicated efforts of faculty and the department's commitment to high-quality education. Participants appreciated the supportive learning environment and modern infrastructure provided during the programme.

Several constructive suggestions were also received:

- **Expansion and Outreach:** There was a demand to offer similar skill-based programmes regularly and extend participation to students from other institutions to foster greater academic exchange.
- **Industry Linkages:** Participants recommended integrating industry-oriented workshops, certifications, and expert lectures to enhance job readiness and practical exposure.

- **Practical Enrichment:** Suggestions included increasing computer-based GIS classes, more field visits, and real-time case study applications.
- **Soft Skills Training:** Many students requested the inclusion of sessions focused on soft skills like communication, teamwork, and time management.
- **Continuous Improvement:** The need for regular feedback mechanisms to refine content and delivery methods was emphasized.
- **Future Programmes:** Participants encouraged the department to conduct more workshops in GPS surveying, advanced GIS tools, remote sensing applications, and geospatial database management.

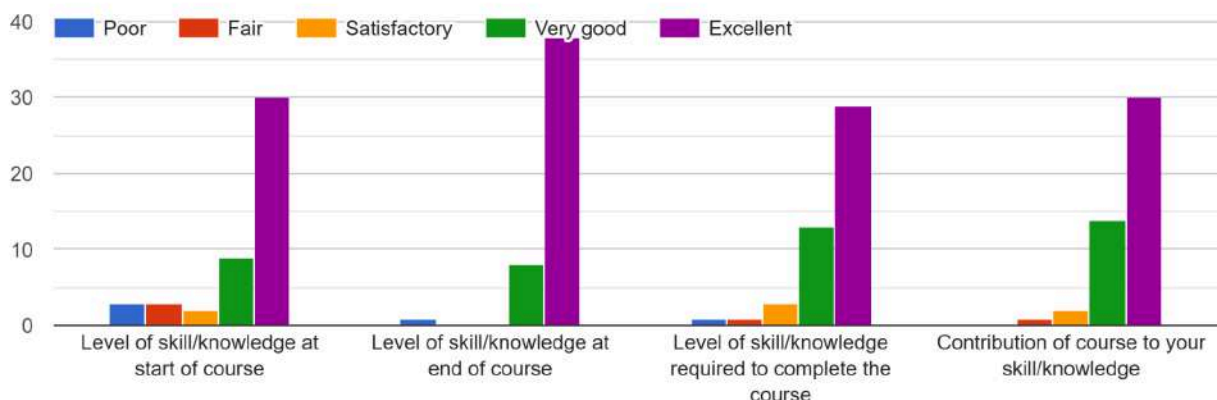
Feedback from Participants:

The recent Internship Programme on “**Geospatial Technologies for Resource Management**” has received overwhelming responses from the student community. Here is the brief feedback on the Programme.

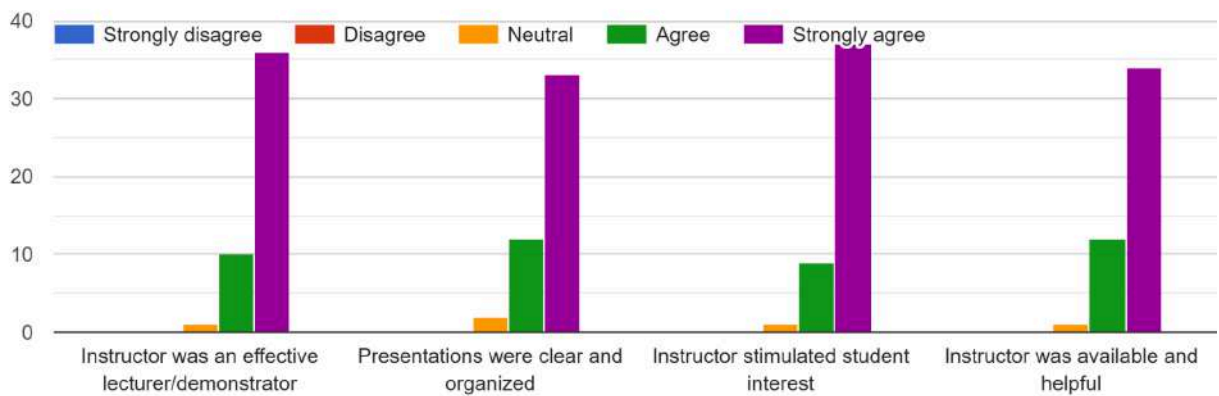
Level of effort of the Instructor



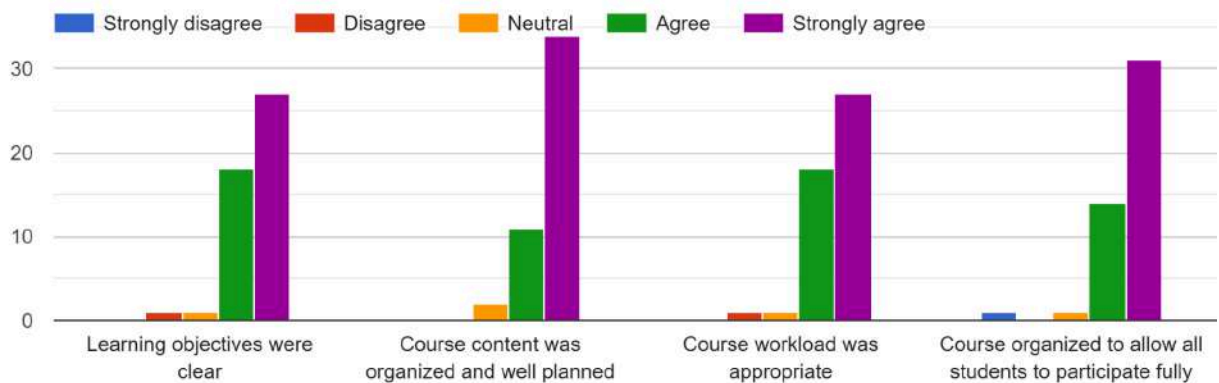
Contribution to learning



Skill and responsiveness of the instructor



Course content



What aspects of this course were most useful or valuable to you?

One of the most valuable aspects of this course was the **strong emphasis on practical exposure**. The opportunity to work with **real-world geospatial data** allowed me to apply theoretical concepts to actual challenges, significantly enhancing my understanding of the subject.

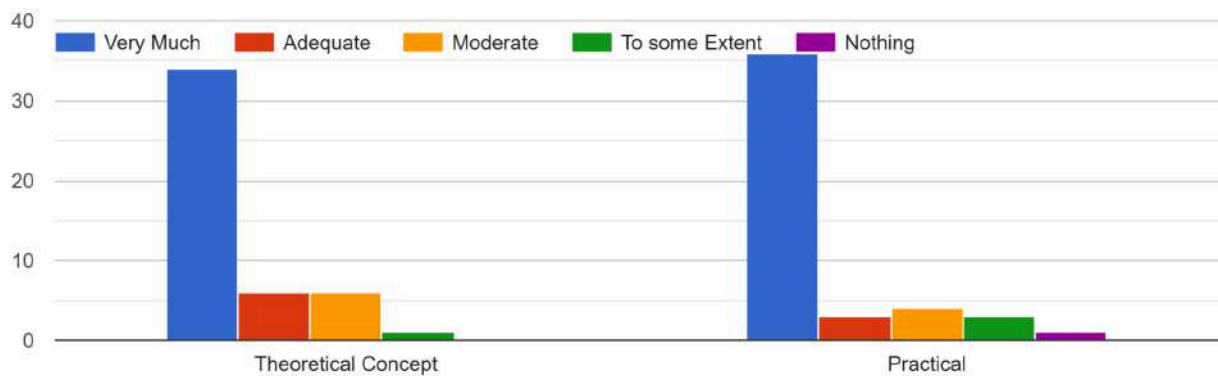
The **hands-on sessions** were particularly beneficial. Working with instruments, conducting **field-based learning**, and participating in activities such as **flying drones and performing GIS-related tasks on the computer** provided immersive, experience-driven learning that deepened my technical skills.

The **fieldwork component** was especially impactful. It helped me understand how data is collected in GIS and Remote Sensing and how it relates to our environment and surroundings. These experiences bridged the gap between classroom learning and real-world application.

Additionally, the **group discussions and collaborative projects** encouraged critical thinking and exposed me to diverse viewpoints. These interactions enriched my learning experience and built essential teamwork and communication skills.

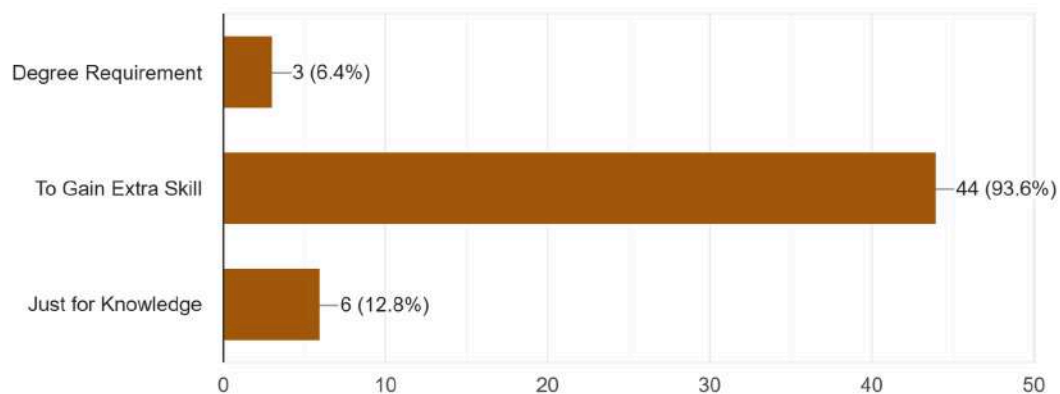
Overall, this course has been incredibly valuable in expanding my knowledge of **Remote Sensing and GIS**, and I truly appreciate the Geography Department's effort in organizing such a comprehensive and skill-based program.

How would you improve yourself from this course?



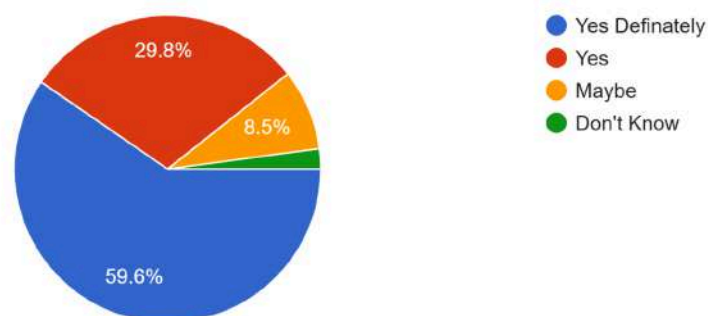
Why did you choose this course?

47 responses



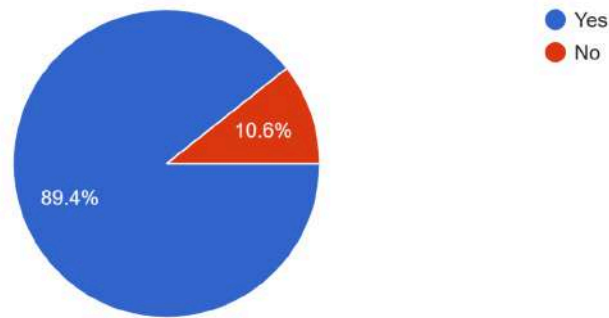
Do You need such course in future

47 responses



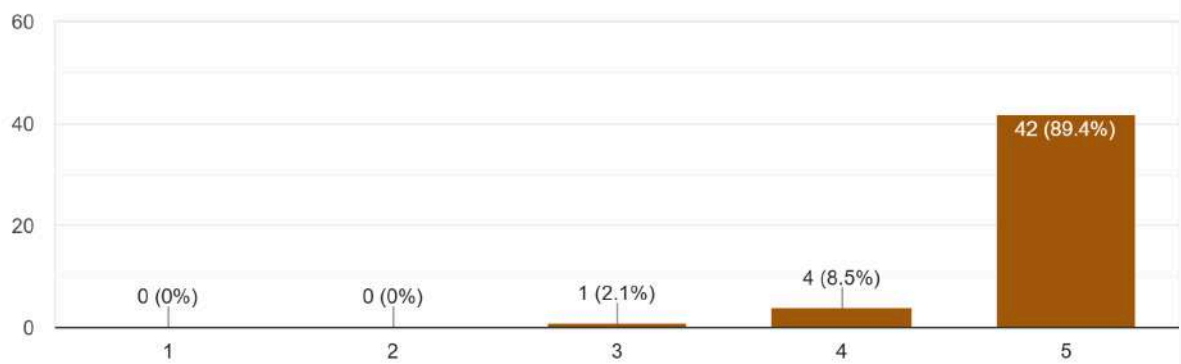
Do you Need a Diploma Course on this Topic

47 responses



How do you Rate Department for offering such Course?

47 responses



Suggestions received from the Participants to Improve Departmental Activities and Provision of such skill-based programmes.

The recently conducted course on "**Geospatial Technologies for Resource Management**" received overwhelmingly positive feedback from participants, highlighting both the academic rigor and the practical relevance of the program. The initiative was praised for its skill-based orientation, which significantly enhanced participants' understanding of geospatial technologies and their applications in real-world scenarios.

Participants appreciated the dedicated efforts of faculty members and mentors who provided consistent support and guidance throughout the course. The department's well-equipped infrastructure and commitment to quality education were also acknowledged. However, several valuable suggestions were put forth for further enhancement of the program:

- **Expansion of Access and Participation:** Many participants expressed the hope that such **job-oriented programs** would be organized regularly and opened to students from other institutions as well, fostering broader academic engagement.
- **Industry Collaboration and Certification:** There was a strong recommendation to incorporate **industry-oriented workshops, certifications, and guest lectures by**

professionals to bridge the gap between academic learning and industry expectations. Students emphasized the need for **collaborative, hands-on training sessions** to develop practical competencies.

- **Enhancement of Practical Learning:** Suggestions included increasing the number of **computer-based GIS classes**, and providing more opportunities for **real-time data collection, field visits, and case study-based learning** to reinforce conceptual understanding through real-world applications.
- **Focus on Soft Skills and Professional Development:** Several students recommended the inclusion of sessions focusing on **soft skills development**, such as communication, teamwork, and time management, to better prepare for the professional world.
- **Regular Feedback and Student Engagement:** To continuously improve the effectiveness of such programs, it was proposed that **regular feedback sessions** be held with students to understand their challenges and tailor the curriculum to evolving needs.
- **Future Skill-Based Offerings:** Participants encouraged the department to organize additional **skill-based workshops**, especially in areas like **Remote Sensing, GPS Surveys, GIS software training, and database management**, to provide comprehensive exposure to modern geoinformatics tools and techniques.

Conclusion

In conclusion, the course was a valuable and enriching experience for all participants. The collective suggestions point towards a future where **more inclusive, field-oriented, and professionally integrated geospatial programs** will continue to benefit students, preparing them more effectively for academic and professional success.

Attendance

Gour Mahavidyalaya Department of Geography Attendance Sheet for Internship					
Date: 13/06/25			Session: Morning/Afternoon		
Full Name (Capital Letter)	College Name	Subject in UG Level	University Roll Number	Semester	Signature
Arup Mandal	Gour Mahavidyalaya	Geography	1223GEOM-0006	Iv	Arup Mandal
ABHIJIT DAS	Gour Mahavidyalaya	Geography	1223GEOMJ 0001	4th	Abhijit Das
ANTARA DUTTA	Gour Mahavidyalaya	Geography	1223GEOMJ0002	4	
ARIJIT GHOSH	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ0003	4	Arijit Ghosh
ARMAN SARKAR	Gazole mahavidyalaya	Geography	1123GEOMJ0002	4	Arman Sarkar
ARNAD KUMAR DAS	Gour Mahavidyalaya	Geography	1223GEOMJ 0004	4	Arnad Kumar Das
AVI BASAK	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ 0007	4	Avi Basak
BALORAM HEMBRAM	Gour Mahavidyalaya	Geography	1223GEOMJ 0008	4th Semester	Baloram Hembram
BAPAN SAHA	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ 0009	4 th SEMESTER	Bapan Saha
BARSHA CHOWDHURY	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ 0011	4th	Barsha Chowdhury
BINA GAIN	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ 0012	4 semester	Bina Gain
BITTU ROY	Gour mahavidyalaya	Geography	1223GEOMJ 0014	Semester 4	Bittu Roy
DEB MANDAL	Gour Mahavidyalaya	Geography	1223GEOMJ 0015	4	Deb Mandal
DEBASHREE GHOSH	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ 0016	4th	Debashree Ghosh
DEBOJYOTI PAUL	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ 0017	4th semester	Debojyoti Paul
DEEP BISWAS	Gour Mahavidyalaya	Geography	1223GEOMJ0018	4	Deep Biswas
DILRUBA PARVIN	Gour Mahavidyalaya	Geography	1223GEOMJ 0019	4th	Dilruba Parvin
DIPAK GHOSH	GOUR MAHAVIDYALAYA	Geography	ROLL-1223 NO-0020	4th SEM	Dipak Ghosh
DIVA CHAKRABARTY	Gour mahavidyalaya	Geography	1223GEOMJ0021	4th	Diva Chakraborty
IRFAN AHAMMED	Gazole mahavidyalaya	Geography	1123GEOMJ0006	4	Irfan Ahmed
KANKONA SIKDER	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ 0023	4th	Kankona Sikder
KARTIK SAREN	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ 0024	IV	Kartik Saren
KOUSHIK SARKAR	Gour mahavidyalaya	Geography	1224GEOMJ	2nd	
KRITTIKA DAS	Gour Mahavidyalaya	Geography	1223GEOMJ 0025	IV	Kritika Das
MD HADI	GOUR MAHAVIDYALAYA	Geography	1223GEOMJ-0026	IV	MD Hadi

Copy of Certificates



Head
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