



Department of Geography, Miranda House
under the aegis of IQAC, Miranda House
invites registrations for
Online Training Programme-cum-Workshop on

Geo-Informatic Research Tools and Techniques for Advanced Academic Research

Duration: 4 weeks (From 1 Sept – 30 Sept 2023)
Time: 1:00pm – 5:00pm (on Weekends)
Mode: Online



Guidelines:

1. This course is open to Post-Graduation students, Research Scholars and Faculty members from all disciplines.
2. Seats are limited. Only first 100 registered participants will be accepted for the course

Registration Fee:

Rs 1500 (For Faculty members)
Rs 1000 (For Research Scholars)
Rs 700 (For PG Students)

Registration link: <https://forms.gle/jDorDwNm6xWRZ5H86>

Patron:

Prof. Bijayalaxmi Nanda
Principal, Miranda House

Teacher-in-Charge

Dr. Rakhi Parijat
Department of Geography

Convenor

Dr. Monika Vij
Department of Geography

Instructors

Dr. Om Jee Ranjan (9818550336)
Department of Geography
Miranda House

Dr. Praffulit Bisht (9773552184)
Department of Geography
Miranda House



Department of Geography
Miranda House
University of Delhi

Under the aegis of IQAC Miranda House

proposes an

Online training programme-cum-workshop series on
“Geo-Informatic Research tools and techniques for Advanced Academic Research”

Duration: 35 hours (4 Weeks)

Objective: The objective of this week-long module is to equip teachers and faculty members with a comprehensive understanding of Geographic Information Systems (GIS) and empower them to effectively integrate these advanced geospatial technologies into their teaching practices. By the end of the module, participants will possess the knowledge and skills required to utilize geospatial data for a wide range of educational purposes and research applications.

Geographic Information Systems (GIS) is a powerful tool that enables the capture, analysis, and visualization of spatial data. It offers a unique perspective on various phenomena and allows for the exploration of relationships and patterns in the physical and social world. By gaining a thorough understanding of GIS, participants will be able to incorporate spatial thinking into their teaching, providing students with opportunities to develop critical thinking, problem-solving, and analytical skills.

Throughout the module, participants will engage in hands-on activities, practical exercises, and real-world case studies to enhance their skills in utilizing geospatial data. They will gain proficiency in geospatial analysis techniques, such as spatial query, geoprocessing, and spatial modeling. Additionally, they will learn how to effectively visualize and communicate geospatial data through maps and other visualizations.

By integrating GIS into their teaching practices, participants will be able to provide students with engaging and interactive learning experiences. They can incorporate geospatial technologies across various subjects, fostering interdisciplinary connections and promoting a deeper understanding of spatial relationships in the world. Furthermore, participants will be equipped to conduct research and explore innovative applications of GIS and Remote Sensing in their respective fields.



Outcomes:

After the workshop, participants will learn:

1. Proficiency in GIS softwares
2. Spatial Data and Spatial Analysis Techniques
3. Map Visualization and Designing of Thematic Maps
4. Using GIS tool for problem-solving and decision making

PROGRAMME SCHEDULE

Week 1: Introduction to GIS (8 hours)

- Overview of GIS: Definitions, concepts, and applications in various fields such as environmental science, urban planning, and natural resource management.
- Importance of geospatial data: Understanding the role of geospatial data in decision-making, problem-solving, and analysis.
- Introduction to GIS software: Familiarization with popular GIS software such as ArcGIS, QGIS, and Google Earth.
- Practical exercise: Exploring basic GIS operations and data visualization.

Week 2: GIS Data Collection and Management (9hours)

- Understanding Earth's shape and co-ordinate systems (Geographic co-ordinate system, projected co-ordinate system and UTM)
- GIS data types and sources: Understanding different types of geospatial data, including raster and vector data, and learning about data sources such as GPS, online databases, and surveys.
- Data acquisition techniques: Introduction to data collection methods, including field surveys, GPS data collection, and remote sensing.
- Data management: Organizing and storing geospatial data effectively, including file formats, metadata, and database management systems.
- Practical exercise: Collecting and managing geospatial data using real-world examples.



Week 3: Work with computer-based GIS softwares: With Vector Data (8 hours)

- Geo-referencing: Aligning a digital map or image with real-world coordinates, such as latitude and longitude.
- Advanced digitization: Converting analog or physical data, such as maps, plans, or images, into digital format.
- Buffering, Clipping, and Spatial joins: creation of new datasets that contain information from multiple sources, facilitating comprehensive spatial analysis and decision-making
- Spatial Query: Retrieving specific information from a geographic dataset based on its spatial characteristics.

Week 4: Geo-spatial Data Visualization (10 hours)

- Creating thematic maps, choropleth maps, and heat maps for effective data representation.
- Practical exercise: Analyzing and visualizing geospatial data to solve a specific problem or answer research questions.

After the workshop, participants will have gained the necessary knowledge and skills to seamlessly integrate Geographic Information Systems (GIS) into their teaching practices and research studies. This integration will enable them to create engaging and interactive learning experiences for students or collaborative opportunities with their peers.

With this knowledge and skill set, participants will be able to design and implement spatially-oriented projects and activities that promote active learning and critical thinking. They will be capable of incorporating geospatial technologies into their curriculum across various disciplines, such as geography, environmental science, urban planning, social sciences, and more.

Registration fees: Rs. 1500 (for faculty members), Rs 1000 (for research scholars), Rs 700 (for PG students)

Registration link: <https://forms.gle/jDorDwNm6xWRZ5H86>



Who can participate: Researchers and academicians from various fields such as geography, environmental science, urban planning, agriculture, archaeology, and natural resource management who use spatial data and analysis in their research.

Instructions for the participants:

1. This online course is open to postgraduate students, research scholars and faculty members from all disciplines.
2. The course will run in online mode on Saturdays and Sundays in the weekend of the month of September (Expected timings to be between 1 PM to 5 PM).
3. 80% attendance is mandatory for getting the certificates.
4. Submit your fee through the link provided in the form. And attach the screen shot along with the Transaction ID. Fee submitted in any other way will not be accepted.
5. Seats are limited. Hence, they will be filled on First-Come-First-Serve basis. Your seat will be considered reserved after successful submission of fee.
6. Fee once deposited will not be refunded under any circumstances.
7. Every participant has to submitted appropriate fee to reserve the seat.
8. Miranda House has the full authority to determine the time and duration of the course and take all decisions related to its implementation. Miranda House reserves the right to make changes.