

Health, Nutrition, and Wellbeing: Evidence, Evaluation, and Way Forward

Pre-Conference Workshop Schedule

Workshop-1: Spatial Analysis in Health Using R and ArcGIS

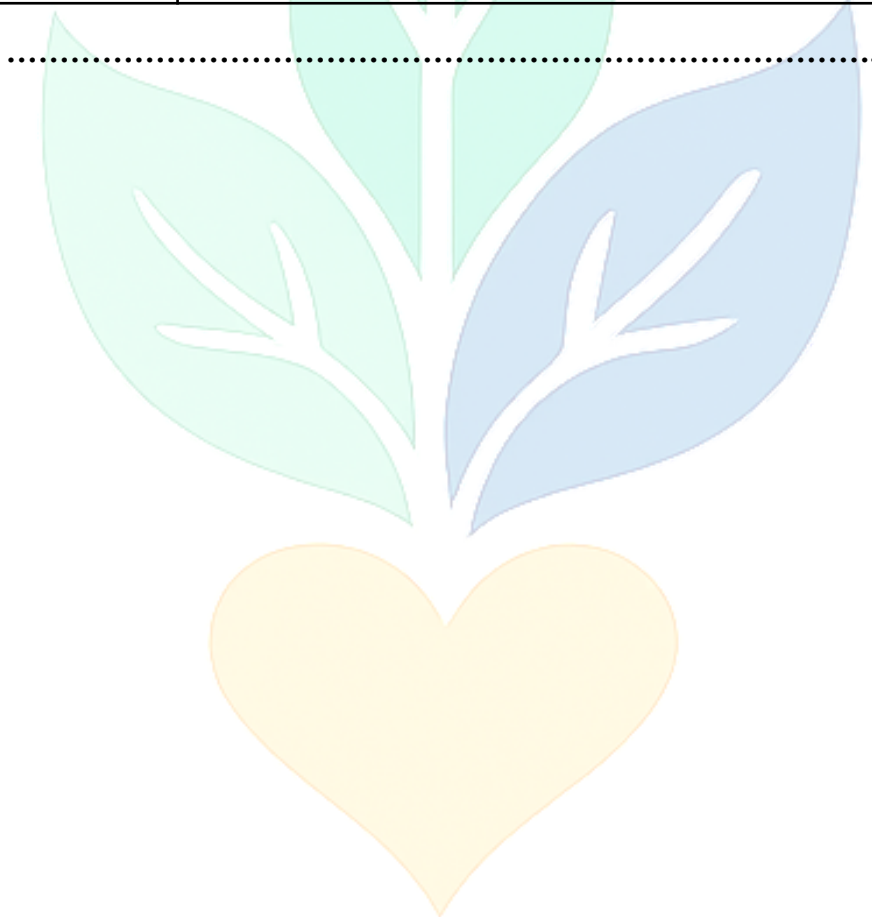
Resource Person: Dr Pankaj Narula

Assistant Professor

Thapar Institute of Engineering and Technology, Patiala

Day-I: Wednesday, December 10, 2025, Venue: A18-1A	
07:45 am - 09:00 am Breakfast Oak Mess	
09:15 am-10:50 am	Intro to R and RStudio RStudio interface Variables, vectors, basic functions Simple calculations & logical operations
10:50 am - 11:10 am	Tea Break (20 min)
11:10 am - 01:30 pm	Working with Data Frames and Reading CSVs Creating and inspecting data frames Importing CSVs Filtering, subsetting, and basic summaries
01:30 pm - 02:30 pm	Lunch Break (60 min)
02:30 pm - 04:00 pm	Introduction to ggplot2 Understanding ggplot() syntax Creating bar, line, and scatter plots Customizing axes, titles, and colors
04:00 pm - 04:15 pm	Tea Break (15 min)
04:15 pm - 05:30 pm	Introduction to Spatial Data and Base Plotting Read shapefiles with sf::st_read() Basic plot() of shapefiles and introduction to coordinate systems
Day-II: Thursday, December 11, 2025, Venue: A18-1A	
07:45 am - 09:00 am Breakfast Oak Mess	
9:15 am - 10:50 am	Mapping Vector Data with ggplot2 and geom_sf Explore shapefile with sf Map features using ggplot2 + geom_sf() Customize themes, legends, and titles
10:50 am - 11:10 am	Tea Break (20 min)
11:10 am - 01:30 pm	Joining CSV Data to Shapefile and Thematic Mapping Load tabular data (e.g., literacy.csv)

	Merging with shapefile Create choropleth maps and adjust colour palettes, labels, and legends
01:30 pm - 02:30 pm	Lunch Break (60 min)
02:30 pm - 04:00 pm	Introduction to Raster Data and Overlaying with Vector Load raster data Plot and crop raster Overlay shapefile on raster
04:00 pm - 04:15 pm	Tea Break (15 min)
04:15 pm - 05:30 pm	Zonal Statistics Calculate mean raster value (e.g., elevation) Join back to shapefile Participants create their own maps (literacy, elevation, etc.) Save map as image using ggsave()
05:30 pm - 06:30 pm	Closing session and Group feedback session



Participants

1. Aakriti Aggarwal
2. Aayush Dwivedi
3. Akshima
4. Ali Abbas Rizvi
5. Anadhi Sharma
6. Anisha Ojha
7. Atul Kumar
8. Dibyendu Biswas
9. Dr Archana Singh
10. Eva Reang
11. Gauri Arora
12. Kajal Kumari
13. Kareena Kaushik
14. Mohd Irfan
15. Naveen
16. Priyadarshini Rathore
17. Sabhya Yadav
18. Sagar
19. Samarth Mahajan
20. Sandeep singh
21. Sania Khan
22. Sayantani Manna
23. Siddika Banu
24. Suphal
25. Tanya
26. Vishnu Priya V V

