

## Proposal for announcing seat under the Institute Internship Program

1. **Name of faculty member proposing:** Dr. Nand Kumar
2. **Department/Centre:** Department of Architecture and Planning
3. **Topic on which work is proposed:** Proposal on Identification of Air Pollution Hotspots in Alwar and Udaipur Region
4. **Preferred period of internship (after May 20<sup>th</sup>):** Between 20 May 2024 to 20 July 2024
5. **Qualification of student (branch/semester of study):** Bachelors in Planning (B.Plan) or Post graduate (Masters) qualification in Urban Planning / Environmental Planning / Transportation Planning or related disciplines from a reputed university/institute.

### **6. Brief description of work (300-500 words):**

The increasing concerns about air quality and its impact on public health necessitate a detailed understanding of the sources and distribution of air pollutants. Our proposed research involves a multidisciplinary approach encompassing emission inventory development, source identification, air quality modeling, and hotspot prioritization. The study aims to provide a robust foundation for effective pollution control measures in the identified hotspots.

- a. Developing a detailed emission inventory for the base year 2024.
- b. Identifying major sources of air pollution in the Alwar and Udaipur regions.
- c. Quantify emissions of primary air pollutants through strategic monitoring stations.
- d. Assess spatio-temporal variations in pollution levels.
- e. Creation of detailed pollution hotspot maps to understand the concentration and distribution of specific contaminants in different locations.
- f. Development and implementation of a targeted action plan for emission control, incorporating regulatory measures, technological interventions, and community engagement.

### **7. Expected learning of student (upto 100 words):**

Students will gain practical experience in air quality monitoring, emission inventory development, and pollution source identification. They will learn to analyze spatio-temporal variations in pollution levels and prioritize air pollution hotspots. Additionally, students will develop skills in data collection, analysis, and interpretation, along with exposure to environmental planning strategies and pollution control measures. This internship offers an opportunity to apply theoretical knowledge to real-world environmental challenges, enhancing their understanding of urban environmental planning and contributing to their professional development.

**8. Nature of work: (Experimental/simulation/mathematical modelling/data collection-analysis etc.): upto 50 words**

The nature of work involves data collection and analysis, including developing an emission inventory, conducting air quality monitoring, and identifying sources of air pollution. The student will also engage in spatial analysis, hotspot prioritization, and field investigations to map source activity types in the Alwar and Udaipur regions.

**9. If the seat is under project sponsored category: No**



**Signature of faculty member**

Department of Architecture and Planning

**Name of department/Centre**

Note:

- a) Proposing faculty member needs to be available at the Institute during the period internship is offered
- b) No extra space or funding than the stipend will be provided by the institute for this purpose