

School of Environmental Sciences

[Established: 1974]



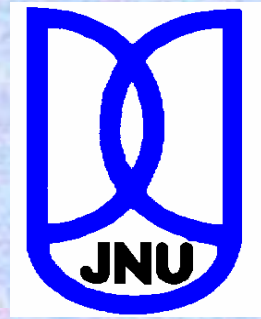
Introduction

School of Environmental Sciences was established in 1974. School has interdisciplinary focus bringing together Physics, Chemistry, geology, Ecology, & biological Sciences - to gain an insight into the environmental issues and processes at local regional and global levels in an integrated manner.

Faculty of the school

<i>Name of Faculty</i>	<i>Designation</i>	<i>Major areas of Research</i>	<i>Number of Ph.Ds. produced(in last 5 yr)</i>
V,K. Jain	Dean & Professor	Aerosol Physics/ Air Pollution	5
V. Rajamani	Professor	Geochemistry/Nutrient Cycling	4
K. Dutta	Professor	Environmental Biochemistry	3
K.G. Saxena	Professor	Biodiversity/Sustainable Development	4
S. Bhattacharya	Professor	Environmental Biochemistry/Molecular Biology	4
V. Subramanian	Professor	Geochemistry/Water Pollution	5
Arun K. Attri	Professor	Climate Change/Radiation & Environment / Atmospheric Chemistry	5
Brij Gopal	Professor	Limnology /Wetland Ecology	3
J. Behari	Professor	Environmental Physics/Microwave	2
A.L. Ramanathan	Asso. Professor	Biogeochemistry/Costal Geochemistry	6
I. Thakur	Asso. Professor	Bioremediation/ Environmental Biotechnology	1
S. Mukherjee	Asso. Professor	Remote sensing/Ground Water /GIS	5
P.S. Khillare	Asso. Professor	Air Pollution/EIA	4
K. Mukhopadhyya	Asso. Professor	Environmental Toxicology	New Faculty
I. Ghosh	Asst. Professor	Environmental Biochemistry	New Faculty
Krishan Kumar	Asst. Professor	GIS/Modeling/Noise Pollution	New Faculty
S.Yadav	Asst. Professor	Environmental Chemistry	New Faculty
J. K. Tripathi	Asst. Professor	Environmental Geochemistry	New Faculty
Paul Raj R	Asst. Professor	Environmental Biology	New Faculty
Meenakshi Dua	Asst. Professor	Environmental Biology	New Faculty

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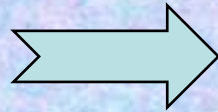


- Activities: Teaching and Research
- Programs: M.Sc and M.Phil/Ph.D
- Total Faculty: 20
- Technical Staff: . TO (1); STA (2); TA(3)
- Number of Ph.D (till date): 176
- Number of M.Phil (till date): 271
- Intake M.Sc : ~ 20 students per year
(10 each from physical & Biological science background)
- Intake M.Phil/Ph.D~ 20 students per year
- Admission:
M.Sc.- Through nationwide written entrance test.
M.Phil/Ph.D. - Through nationwide written & viva entrance test
Direct Ph. D. – Through viva only.

SES: Academic Structure consist of following four areas

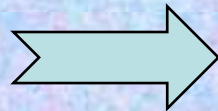


- Physics



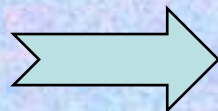
- Atmospheric Physics, Aerosol studies, Energy studies, Electromagnetic Rad. Noise pollution, Theoretical Ecology and Modeling

- Chemistry



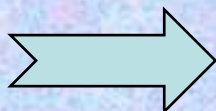
- Chemistry :Soil/Water/Air, Limnology, Pollution Chemistry, Solid waste management and EIA

- Geology



- Earth Processes, Geochemistry Hydrology, Remote Sensing

- Biology



- Ecology, biochemistry, Molecular Biology, biophysics, Toxicology and Occupational Health

Specific Research Activities

Atmosphere

- Physical and chemical characterization of aerosols and their source apportionment, gaseous air pollutants and global warming.
- Quantitative estimation of VOC's from natural (Terpenes etc.) and anthropogenic sources and their potential in determining oxidation potential of atmosphere.
- Impact assessment of plant damage due to the reactive atmospheric constituents.
- Probing the scientific bases of fog formation in winter months in northern India.

Specific Research Activities

Water

- **Water quality: surface, subsurface, soil and atmospheric dimensions with respect to nutrient flow and contamination.**
- **Water resource development: the application remote sensing technique.**
- **Aquatic ecology: life processes in aquatic environment**
- **Water Conservation: rain water harvesting, check dam etc. and recycling of wastewater**
- **Biological aspects: bio-remediation and microbial based water quality.**
- **Water borne diseases: applications of molecular probes to detect water borne diseases**
- **Application of modeling to probe aquatic systems including transport processes.**
- **Water pollution: monitoring and remedial measures.**

Specific Research Activities

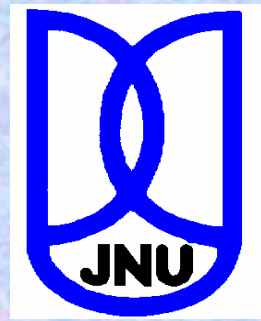
Soil:

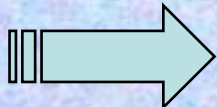
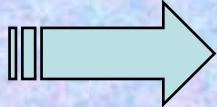
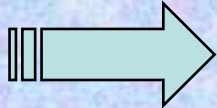
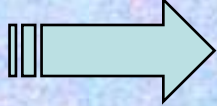
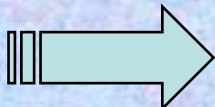
- **Chemical processes and Nutrient cycling in soil**
- **Soil remediation**
- **Landuse and problems for soil conservation**
- **Soil contamination and bioremediation, in situ and ex situ .**
- **Geochemistry of Hard rocks**

Biology:

- i) **Cell-Cell and Cell matrix interaction in cellular signaling in response to environmental stimuli**
- (ii) **Development of novel, economical molecular biology based methods to detect the drug sensitivity of parasite strains to for effective control and treatment of diseases.**

SES: Publications/Patents



- Research Publications, Books
- & Reviews:  > 600
- International Patents:  2
- National Patents:  4
- Patents Applied for:  4
- Research Publications
(Last 5 years)  ~ 150