

Course Type	Course Code	Name of the Course	L	T	P	Credits
DC	NESC506	Air and Noise Monitoring Practical	0	0	3	1.5

Course Objectives

To learn monitoring and assessment of ambient air and noise quality.

Overall Learning Outcomes

Upon successful completion of this course, students will be able to:

- The students will learn various analytical and sampling protocols to monitor and analyze various ambient air and noise quality parameter.

Unit No.	Topics to be covered	Practical Hr (P)	Learning outcomes
Air Monitoring Practical			
I	Calibration of orifice of the Respirable Dust Sampler (RDS) and Determination of Particulate Matter (PM ₁₀ & PM _{2.5}) in ambient air	3	Students will understand principal of RDS and estimation Particulate matter.
II	Determination of SO ₂ in ambient air	3	Students will learn analysis of sulphur di oxide and use of titration and spectrophotometer.
III	Determination of NO _x in ambient air	3	Students will learn analysis of Nitrogen oxides and use of spectrophotometer.
IV	Determination of Ammonia in Ambient Air.	3	Students will get exposure of ammonia monitoring and analysis.
V	Determination of CO and Ozone in ambient air.	3	Students will get exposure to CO and Ozone analyser.
VI	Elementary analysis of Particulate matter for heavy metals through AAS.	3	Student will get Exposure of AAS.
VII	Analysis of Benzene and Benzo Pyrene.	3	Student will get Exposure of GC and HPLC.
VIII	Construction of Wind rose diagram & Demonstration of Stack Monitoring Kit	3	Will learn metrological aspects.
Noise Monitoring Practical			
IX	Ambient noise monitoring	3	Will learn concept of noise measurement.
X	Frequency spectrum analysis of machine noise	3	Will learn importance and analysis of frequency wise noise level.
XI	Study of Noise Contour	3	Will learn impact of wind direction of propagation of sound wave.
XII	Traffic noise monitoring	3	Will learn importance and procedure for traffic noise monitoring.
XIII	Audiometry survey for assessing hearing acuity	3	Will learn occupational effect of noise and its assessment.
XIV	Practice & Review	3	To enhance the knowledge and assess the progress.
Total		42	

Reference books:

- Guidelines for measurement of Ambient air Pollutants, Volume 1, CPCB 2011.
- IS 5182 (Part 14): Methods for Measurement of Air Pollution, Part 14: Guidelines for Planning the Sampling of Atmosphere (Second Revision) by Bureau of Indian Standards (BIS).