

Course Type	Course Code	Name of Course	L	T	P	Credit
DSC4	NESC104	Air and Noise Practical	0	0	2	1

Course Objective

- To learn assessment of ambient air and noise quality

Learning Outcomes

Upon successful completion of this course, students will:

- 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	Lecture Hours	Learning Outcome
1.	Calibration of orifice of the Respirable Dust Sampler (RDS) and Determination of PM ₁₀ in ambient air	2	Students will understand principal of RDS and estimation Particulate matter.
2.	Calibration of orifice of the Respirable Dust Sampler (RDS) and Determination of PM _{2.5} in ambient air	2	Students will understand principal of RDS and estimation Particulate matter.
3.	Determination of SO ₂ in ambient air	2	Students will learn analysis of sulphur di oxide and use of titration and spectrophotometer.
4.	Determination of NO _x in ambient air	2	Students will learn analysis of Nitrogen oxides and use of spectrophotometer.
5.	Determination of CO and Ozone in ambient air.	2	Students will get exposer to CO and Ozone analyser.
6.	Elementary analysis of Particulate matter for heavy metals and PAHs.	2	Student will get Exposure of GC and HPLC.
7.	Determination of Ammonia in Ambient Air.	2	Students will get exposure of ammonia analyais.
8.	Construction of Wind rose diagram & Demonstration of Stack Monitoring Kit	2	Will learn metrological aspects.
9.	Ambient noise monitoring	2	Will learn concept of noise measurement.
10.	Frequency spectrum analysis of machine noise	2	Will learn importance and analysis of frequency wise noise level.
11.	Traffic noise monitoring	2	Will learn importance and procedure for traffic noise monitoring.
12.	Audiometry survey for assessing hearing acuity	2	Will learn occupational effect of noise and its assessment.

Text Book

- Guidelines for measurement of Ambient air Pollutants, Volume 1, CPCB 2011.

Reference Book:

- 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).