Course Type	Course Code	Name of Course	L	T	P	Credit
DC	ESC 203	Noise Pollution and Control	3	0	0	9

Course Objective

- To impart knowledge on the sources, effects and control techniques of noise pollution.
- To impart knowledge about the preventive measures against noise pollution.

Learning Outcomes

Upon successful completion of this course, students will:

- To understand the nature and characteristics of noise pollution and basic concepts of noise control management.
- The students will able to identify, formulate and solve noise pollution problems.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	Fundamentals of Noise: Sound power, Sound intensity and Sound pressure levels. Effects of noise - Presbycusis, Acoustic Trauma. Characterization of Noise from Construction, Mining, Transportation and Industrial Activities. Permissible noise levels in different zones, Noise standards and indices.	12	The knowledge of concepts of fundamental noise and its characterization.
2	Noise monitoring: ambient and road traffic noise monitoring, Noise Control measures, Design of Sound Absorption, Acoustic Barrier, Vibration Isolation, Vibration Damping, Muffling, Personal Protector and Green Belt for noise attenuation.	06	The knowledge regarding noise monitoring of ambient and traffic noise and its control measures.
3	Whole Body Vibration problems in surface mines and control measures. Ground Vibration and Air Blast - Environmental impacts, strategic planning and abatement.Environmental noise modeling: Important conditions, its scope and limitation , Noise assessment and purposes.	13	The information regarding different types of environmental impacts due to noise and its strategic planning and management.
4	Assessment of atmospheric attenuation with respect to enclosures, barrier, geometric spreading, air absorption, wind & temperature gradient, Ground effect, shielding by vegetation/greenbelt; and projections of noise contouring of the concerned area. Noise mapping and applications of salient noise models, eg. ENM, Sound PLAN etc.	11	The knowledge about Noise mapping and its applications in noise modeling for assessment of atmospheric attenuation.

Text Book

Environmental Noise Pollution – PE Cunniff, McGraw Hill, New York.
Noise Control: Principles and Practices - Bruel & Kjaer, 2nd ed. B & K Pub., Denmark.

Reference Book :

Engineering Noise Control: Theory and Practice – David Bies et. al., Routledge Publishers.