

# The Schedule

| Session    | Topic  | Instructor                  | Time        |
|------------|--|-----------------------------|-------------|
| <b>S1</b>  | Introduction to air pollution, sources of air pollution, scales of air pollution problem, effects of air pollution, philosophy of air pollution control and Indian standards and legislations for air quality management                                       | SMSN                        | 110 minutes |
| <b>D1</b>  | <b>Discussions and Interactions S1</b>   | SMSN                        | 10 minutes  |
| <b>S2</b>  | Air Pollution Meteorology Concepts-atmospheric stability, dry and wet adiabatic lapse rates; stability classification; plume shapes.<br>Air Pollution Monitoring : principles used in measurement of gaseous and particulate pollutants, types of sampling and | SMSN                        | 110 minutes |
| <b>D2</b>  | <b>Discussions and Interactions S2</b>   | SMSN                        | 10 minutes  |
| <b>S3</b>  | Air Quality Modelling- physical principles; Types of air quality models and their uses.<br>Control of Air Pollution: engineering control concepts, control devices and their applications  | SMSN                        | 110 minutes |
| <b>D3</b>  | <b>Discussions and Interactions S3</b>   | SMSN                        | 10 minutes  |
| <b>S4</b>  | Special Topics in Air Quality Management: (i) Air Pollution and Local Climate Change (ii) low cost sensors in personal exposure monitoring   | SMSN                        | 60 minutes  |
| <b>DI4</b> | <b>Preparatory session for assessment: tutorial problem discussion</b>   | SMSN                        | 60 minutes  |
| <b>A</b>   | <b>Assessment</b>  | <b>Local Faculty Member</b> | 180 minutes |

**Pre-requisites: Students belongs to Aerospace, Civil, Chemical, Environmental, Mechanical, Electrical and Computer Science and Engineering**

**Relevant semester: 6 (3rd Year) & 8 (4th Year) Semesters**



## **Important References**

- Arya, S.P., 1999. *Air pollution meteorology and dispersion*, Oxford University Press, UK.**
- Boubel, R.W., Fox, D.L., Turner, D.B. and Stern, A.C., 1994. *Fundamentals of air pollution*. 3<sup>rd</sup> Edition, Academic Press, New York. Lyons and Scott, 1990. *Principles of Air Pollution Meteorology*, CRC Press.**
- Peavy, H.S. Rowe, D.R. and Tchobanoglous, G., 1985. Environmental Engineering. McGraw Hill International Editions, New York. Rao, C.S., 1995. Environmental Pollution Control Engineering. Wiley Eastern Limited, New Age International Limited, New Delhi. Theodore, L., 2008. Air Pollution Control Equipment Calculations. John Wiley & Sons Inc Publication, New Jersey.**
- Wark, K. and Warner, C.F., 1981. Air pollution: its origin and control. Harper and Row Publishers Inc., New York, USA.**