

**NORTH MAHARASHTRA UNIVERSITY**

**Pre-Ph. D. Course work**

**Subject: Environmental Science**

**Title of the paper: Techniques of Environmental research**

(Maximum Marks 100)

**Unit: I:** Environmental Sampling Techniques:

- a) Air      b) water      c) soil      d) Noise

(No. of Contact Hours – 10 / Marks – 30)

**Unit: II:** Techniques in Environmental Analysis:

- a) Spectrophotometric      b) Chromatographic  
c) Voltammetric      d) Bio-assay and bio-informatics

(No. of Contact Hours – 10 / Marks – 30)

**Unit: III:** Techniques for sustainable development:

- a) Green Chemistry      b) Remote Sensing & GIS  
c) EIA & Auditing      d) Industrial Health & Safety

(No. of Contact Hours – 10 / Marks – 30)

**Unit: IV:** Basics in scientific writing:

- a) Basic Statistical Methods  
b) Research paper writing  
c) Presentation techniques  
d) Project/Thesis writing

(No. of Contact Hours – 05/Marks – 10)

**List of Reference Books:**

- 'Research Methodology' by C.H. Chaudhary, RBSA Publication.
- 'Elements of Biostatistics in Health Science' by W. Daniell.
- 'Statistical Methods for Research' by S.Singh et. al., Central Publishing, Ludhiana.
- 'Instrumental Methods of Chemical Analysis' by Willard H.H. & Merritt L.L., John Wiley.
- 'Environmental Chemical Analysis' by M.S. Cess & Mar, Amrical Publication.
- 'Environmental Impact Assessments' by Larry W. Canter, Mc-Graw Hill, NY.
- 'Principles of Remote Sensing' by A.N. Patel & S. Singh, Scientific Publishers, Jodhpur.
- 'Green Chemistry- Theory & Practice' by Paul T. Anastas & John C. Warner, Amazon.com
- 'Handbook of Environmental Health and Safety' by Herman Koren & Michel Biseri, Jaico Publishing House, Delhi.