



VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT  
SYLLABUS FOR B.Sc. SEMESTER - I  
FRAMED ACCORDING TO  
NATIONAL EDUCATION POLICY (NEP) 2020 (Effective from June 2023)  
Multidisciplinary Courses  
BO-MDC-101 : Environmental Science

BO-MDC-101	Multidisciplinary Courses : Environmental Science (2 credits)	30 hours
UNIT 1	<b>ENVIRONMENTAL BIOLOGY</b>	15 Hours
	<ul style="list-style-type: none"><li>➤ Environment and Environmental Biology: Definition, Scope, Basic Concepts and current issues of Environment.</li><li>➤ ABIOTIC and BIOTIC components of Environment and their effect on plants and humans.</li><li>➤ Environmental Pollution-Types, sources of Pollution, Classification of pollutants, measure of pollution, Effects of pollutants on the biodiversity.</li><li>➤ Global Warming, Acid Rain</li><li>➤ Bio-concentration and Bio/geomagnification.</li></ul>	
UNIT 2	<b>SOCIAL ISSUES AND ITS RELATION TO ENVIRONMENT</b>	15 Hours
	<ul style="list-style-type: none"><li>• ENVIRONMENTAL ISSUES &amp; SOCIETY:<ul style="list-style-type: none"><li>○ Narmada Bachao Andolan</li><li>○ Chipko Andolan,</li><li>○ Silent Valley Movement.</li><li>○ Women and Environmental Protection,</li><li>○ Family welfare,</li><li>○ Overpopulation,</li><li>○ Health issues.</li><li>○ Role of NGOs in bringing environmental awareness and education in society, Urbanization</li></ul></li></ul>	

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Multidisciplinary Courses PRACTICAL  
BOP-MDC-1 : Environmental Science

BOP-MDC-1	Multidisciplinary Courses : Environmental Science (2 credits)	60 hours
	<ol style="list-style-type: none"><li>1. To perform soil pH analysis</li><li>2. To perform soil water holding capacity.</li><li>3. To perform soil texture analysis.</li><li>4. To study soil moisture content in the given samples.</li><li>5. To assess aeromicroflora of a given environment.</li><li>6. To assess the phyllospheric microflora of a leaf surface.</li><li>7. To study the Soil thermometer as an Instrument used to measure ecological factors.</li><li>8. To study the RAIN GAUGE as an Instrument used to measure ecological factors.</li><li>9. To study the LUX METER as an Instrument used to measure ecological factors.</li><li>10. To study the HYGROMETER as an Instrument used to measure ecological factors.</li><li>11. To study the ANEMOMETER as an Instrument used to measure ecological factors.</li><li>12. To study the SOIL SECCHI DISK as an Instrument used to measure ecological factors.</li><li>13. To study the WET AND DRY THERMOMETER as an Instrument used to measure ecological factors:</li><li>14. To perform Total Dissolved Solids (TDS) in the given sample.</li><li>15. To study pond ecosystem and its components (Plants, Algae, Phytoplanktons and Fauna).</li><li>16. To analyse living organisms in water samples.</li><li>17. To study grass/garden ecosystem (as per availability) and its components.</li></ol>	

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## REFERENCES:

1. P.D. Sharma. Ecology and Environmnt. Rastogi publications.
2. Environmental studies. Popular prakashaṅ Surat.
3. Sharma, P.D. (2010) Ecology and Environment. Rastogi Publications, Meerut, India. 8th edition
4. Shukla, R.S. and Chandel P.S. (2005) A text book of Plant Ecology. S. Chand and Company Ltd., Ram Nagar, New Delhi.
5. Odum, E.P. (2011) Fundamental of Ecology. 5th Edition. Saunders.
6. Odum, E.P. (1983) Basic Ecology Saunders, Philadelphi.

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