



# बिरसा मुंडा ट्रायबल युनिवर्सिटी

## Birsa Munda Tribal University

राजपिपला, जि. नर्मदा Rajpipla, Dist. Narmada

Established by Tribal Development Department, Govt. of Gujarat

### School of Science

### B.Sc. (Zoology) Programme

**Subject Code & Name:** - BS01MDZOO3 Climate change and Sustainable Development

### Teaching and Evaluation Scheme:

Teaching Scheme				Examination Scheme			
Credits				Component Weightage			
				CCE		SEE	
L	T	P	Total	TH	PWE	TH	PWE
3	-	1	4	37.5%	12.5%	37.5%	12.5%

Programme Name	B.Sc. (Zoology)
Semester	I
Course Code	BS01MDZOO3
Course Title	Climate change and Sustainable Development
Course Content Type (Th./Pr.)	Theory
Course Credit	3+1
Sessions+ Lab. Per Week	3+2
Total Teaching/Lab. Hours	60 Hours
* 2 Laboratory = 1 Session	

### Learning Objectives

1. Students should be aware of pollution and different types of environmental pollution.
2. Impart knowledge of different type of disaster and its measures.
3. Students should be aware of water harvesting techniques
4. Students should learn changes of climate, its impact on human and other living being.

### Learning Outcomes

On the Completion of this course, students will able to:

1. Students come to know various types of pollution and its effects. Students learn to check pollution and contribute to the society.
2. Identify new ways of curbing pollution. They also prepare themselves to curb with disastrous incidents like earthquakes, floods etc.
3. Demonstrate an awareness of the difficulties involved in the detection of any unusual global warming 'signal' above the 'background noise' of natural variability in the Earth's climate and of attributing (in whole or in part) any such signal to human activity.
4. Students also know the technology and health. They can contribute to ease the problems related population and health of the community.



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Detailed Contents		
UNIT	TOPIC/SUB-TOPIC	TEACHING HOURS
I	<ul style="list-style-type: none"><li>• <b>Pollution:</b> Causes and Effects of Air Pollution, Water Pollution, Soil Pollution, Marine Pollution and Noise Pollution, Role of an individual in prevention of pollution,</li><li>• <b>Disaster management:</b> Floods, Earthquakes, Cyclones and Landslides.</li></ul>	15
II	<ul style="list-style-type: none"><li>• <b>Social Issues:</b> From unsustainable to sustainable development, Urban problems related to energy, Water conservation, Rainwater harvesting and Watershed management,</li><li>• <b>Resettlement and rehabilitation of people:</b> It's Problems and concerns.</li></ul>	15
III	<ul style="list-style-type: none"><li>• <b>Climate Change and Global Warming:</b> Climate change, Global warming, Acid rain, Ozone layer depletion, Issues involved in enforcement of environmental legislation.</li><li>• <b>Environment and Human Health:</b> Role of information technology in environment and human health.</li></ul>	15
<b>Reference Books</b>		
<ol style="list-style-type: none"><li>1. Environmental Studies- Dr. Suresh K. Dhameja. Published by SK Kataria &amp; Sons, New Delhi-110006</li><li>2. Introduction to Environmental Studies- Chandar K. Sharma, Vrinda Publications Pvt. Ltd. Delhi-110091</li><li>3. Textbook of Environmental Studies for Undergraduate Courses – Erach Bharucha</li></ol>		
<b>Web Resources</b>		
<ol style="list-style-type: none"><li>1. <a href="https://www.ugc.ac.in/oldpdf/modelcurriculum/env.pdf">https://www.ugc.ac.in/oldpdf/modelcurriculum/env.pdf</a></li></ol>		
<b>Unit - IV Practical(s) (if any)</b>		<b>30 Hours</b>
<ol style="list-style-type: none"><li>1. Collection and preparation of soil samples for analysis.</li><li>2. Estimation of pH of given soil sample.</li><li>3. Estimation of electrical conductivity of given soil sample.</li><li>4. Estimation of acidity of given water sample by volumetric method.</li><li>5. Estimation of alkalinity of given water sample by volumetric method.</li><li>6. Estimation of free CO<sub>2</sub> of given water sample by volumetric method.</li><li>7. Estimation of chloride (Cl<sup>-</sup>) of given water sample by volumetric method.</li><li>8. Study of different methods for water harvesting.</li></ol>		

