

**Meerut Institute of Engineering and Technology, Meerut**

**CO-wise Syllabus- EVS**

1	CO-1	Statement	Understand basic concepts related to EIA and the need of sustainable development.
		Syllabus	<b>Environment:</b> Definition, Types of Environment, Components of environment, Segments of environment, Scope and importance, Need for Public Awareness. <b>Ecosystem:</b> Definition, Types of ecosystem, Structure of ecosystem, Food Chain, Food Web, Ecological pyramid. Balance Ecosystem. Effects of Human Activities such as Food, Shelter, Housing, Agriculture, Industry, Mining, Transportation, Economic and Social security on Environment, Environment Impact Assessment, Sustainable Development.
2	CO-2	Statement	Estimate and predict the consequences of human actions on quality of human life and nature.
		Syllabus	<b>Natural Resources:</b> Introduction, Classification. Water Resources; Availability, sources and Quality Aspects, Water Borne and Water Induced Diseases, Fluoride and arsenic Problems in Drinking Water. <b>Mineral Resources</b> ; Material Cycles; Carbon, Nitrogen and Sulfur cycles. <b>Energy Resources</b> ; Conventional and Non conventional Sources of Energy. <b>Forest Resources</b> ; Availability, Depletion of Forests, Environment impact of forest depletion on society.
3	CO-3	Statement	Develop critical thinking for environmental protection.
		Syllabus	<b>Pollution and their Effects; Public Health Aspects of Environmental</b> ; Water Pollution, Air Pollution, Soil Pollution, Noise Pollution, Solid waste management.
4	CO-4	Statement	Understand various current environmental issues and concerns of national and global importance.
		Syllabus	<b>Current Environmental Issues of Importance</b> ; Global Warming, Green House Effects, Climate Change, Acid Rain, Ozone Layer Formation and Depletion, Population Growth and Automobile pollution, Burning of paddy straw.
5	CO-5	Statement	Develop sensitive attitude to adopt sustainability as a practice in life, society and industry.
		Syllabus	<b>Environmental Protection</b> ; Environmental Protection Act 1986, Initiatives by Non Governmental Organizations (NGO's), Human Population and the Environment: Population growth, Environmental Education, Women Education.

<b>B.Tech First Year: Regular Course Lecture Plan Session 2023-24</b>			
<b>Subject Name: Environment &amp; Ecology (BAS104/BAS204)</b>			
<b>CO. No</b>	<b>Title</b>	<b>Topic Description</b>	<b>Lect. No</b>
<b>CO-1</b>	<b>Environment &amp; Ecosystem</b>	Environment- definition; types, components and segments of environment	<b>1</b>
		Scope and importance of environmental science/studies, Need for Public Awareness	<b>2</b>
		Ecology,Ecosystem (Definition, types and structure)	<b>3</b>
		Functions of ecosystem, concept of food chain, food web and energy flow	<b>4</b>
		Ecological pyramids and their types	<b>5</b>
		Impact of human activities (mining and modern agriculture) on environment	<b>6</b>
		Impact of human activities-urbanization (housing, transportation and industrialization) on environment	<b>7</b>
		EIA and its procedure	<b>8</b>
		Concept of Sustainable Development	<b>9</b>
<b>CO-2</b>	<b>Natural Resources</b>	Introduction and classification of natural resources	<b>10</b>
		Water resources (distribution, sources and quality aspects)	<b>11</b>
		Water borne and water induced diseases, arsenic and fluoride	<b>12</b>
		Material or bio-geochemical cycles, Carbon, nitrogen and sulphur cycles	<b>13</b>
		Conventional Sources of Energy: Fossil fuels (coal, petroleum & natural gas), nuclear fuels	<b>14</b>
		Non conventional Sources of Energy: solar, wind, hydro, tidal, geothermal, biomass energy	<b>15</b>
		Forest resources (availability), functions of forest, Deforestation-its causes, impacts and control measures	<b>16</b>
<b>CO-3</b>	<b>Pollution And Their Effects; Public Health Aspects Of Environmental</b>	Environmental pollution, its types and types of environmental pollutants	<b>17</b>
		Causes, impacts and control measures of air pollution	<b>18</b>
		Causes, impacts and control measures of water pollution (waste water treatment)	<b>19</b>
		Causes, impacts and control measures of thermal, soil and noise pollution	<b>20</b>
		Case studies like Bhopal Gas Tragedy, Chernobyl nuclear accident, Minamata disease	<b>21</b>
		Solid waste (including E-waste) and Solid waste management practices	<b>22</b>

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<b>CO-4</b>	<b>Current Environmental Issues Of National &amp; Global Importance</b>	Concept of Global climate change, global warming and greenhouse effect	<b>23</b>
		Concept of Acidrain and ozone layer delpletion	<b>24</b>
		Causes, impacts and control measures of automobile pollution	<b>25</b>
		Burning of paddy straw, its causes, environmental impacts and control measures	<b>26</b>
<b>CO-5</b>	<b>Environmental Protection</b>	Environmental Protection Act 1986	<b>27</b>
		Role of NGO'S and Individuals in environmental protection	<b>28</b>
		Polpulation: population & its characteristics, population growth and related aspects	<b>29</b>
		Environmental Education and need for women education	<b>30</b>