

## Syllabus of M. Sc. Environmental Science

- Course structure & Credits Distribution.

(Compulsory Credits= 76, Elective Credits= 24)

### Semester I: (All courses Compulsory)

ES1-1) Environmental Chemistry	4 credits
ES1-2) Environmental Microbiology and Physiology	4 credits
ES1-3) Computer Applications in Environmental Technology	4 credits
<b>Elective Credits</b>	
ES1-4) Physical Environment and Ecology	4 credits
<b>Or</b>	
ES1-5) Physical Environment and Ecology	2 credits
ES1-6) Soft skills	2 credits
<b>Compulsory Credits (Pr)</b>	
ES1-7) Practical based on ES1-1	2 credits
ES1-8) Practical based on ES1-2	2 credits
ES1-9) Practical based on ES1-3	2 credits
<b>Elective Credits</b>	
ES1-10) Practical based on ES1-4	2 credits
ES1-11) Practical based on ES1-5	1 credit
ES1-12) Practical based on ES1-6	1 credit
<b>Compulsory credit</b>	
ES1-13) Seminar/field work Component	1 credit

### Semester II: (All courses Compulsory)

ES2-1) Air Pollution	4 credits
ES2-2) Water and Soil Pollution	4 credits
ES2-3) Solid wastes, Radiation, Environmental Problems Associated with Major Projects	4 credits
ES2-4) Noise Pollution, Industrial and Occupational Health	4 credits
ES2-5) Practical based on ES2-1	2 credits
ES2-6) Practical based on ES2-2	2 credits
ES2-7) Practical based on ES2-3	2 credits
ES2-8) Practical based on ES2-4	2 credits
<b>Compulsory credit</b>	
ES2-9) Seminar/field work Component	1 credit

### Semester III: (All courses Compulsory)

ES3-1) Environmental Toxicology	4 credits
ES3-2) Waste Water and Water Pollution Control Technology	4 credits
ES3-3) Solid Waste, Soil and Industrial Gaseous Waste Pollution Control Technology	4 credits
<b>Elective Courses</b>	
ES3-4) Air and Noise Pollution Control Technology and New Techniques in Environmental Study	4 credits
ES3-5) Environmental Biotechnology	2 credits
ES3-6) Bioinformatics	2 Credits
<b>Compulsory credits (Pr)</b>	
ES3-7) Practical based on ES3-1	2 credits

<b>ES3-8) Practical based on ES3-2</b>	<b>2 credits</b>
<b>ES3-9) Practical based on ES3-3</b>	<b>2 credits</b>
<b>Elective credits (Pr)</b>	
<b>ES3-10) Practical based on ES3-4</b>	<b>2 credits</b>
<b>ES3-11) Practical based on ES3-5</b>	<b>1 credit</b>
<b>ES3-12) Practical based on ES3-6</b>	<b>1 credit</b>
<b>Compulsory credit</b>	
<b>ES3-13) Seminar/field work Component</b>	<b>1 credit</b>

#### **Semester IV:**

##### **Compulsory Courses (Th)**

<b>ES4-1) Environmental Policy, Planning, Management and Law</b>	<b>4 credits</b>
<b>ES4-2) Dissertation</b>	<b>4 credits</b>

##### **Elective Courses (Th)**

(The elected theory paper must be accompanied by related practical course)

<b>ES4-3) Land use planning and Waste Recycling</b>	<b>4 credits</b>
<b>ES4-4) Geographical Information System</b>	<b>2 credits</b>
<b>ES4-5) Natural resources management</b>	<b>2 Credits</b>
<b>ES4-6) Watershed Management</b>	<b>2 credits</b>
<b>ES4-7) Environmental Hazards: Assessment, Monitoring and Mitigation</b>	<b>4 credits</b>
or	
<b>ES4-8) Disaster Management</b>	<b>4 credits</b>

##### **Compulsory Courses (Pr)**

<b>ES4-9) Practical based on ES4-1</b>	<b>2 credits</b>
<b>ES4-10) Practical and Viva-Voce based on dissertation</b>	<b>2 credits</b>

##### **Elective Courses (Pr)**

<b>ES4-11) Practical based on ES4-3</b>	<b>2 credits</b>
<b>ES4-12) Practical based on ES4-4</b>	<b>1 credit</b>
<b>ES4-13) Practical based on ES4-5</b>	<b>1 credit</b>
<b>ES4-14) Practical based on ES4-6</b>	<b>1 credit</b>
<b>ES4-15) Practical based on ES4-7</b>	<b>2 credits</b>
<b>ES4-16) Practical based on ES4-8</b>	<b>2 credits</b>
<b>Compulsory credit</b>	
<b>ES4-17) Seminar/field work Component</b>	<b>1 credit</b>

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**Total Credits: 100**