

### **3. ADVANCED AND INNOVATIVE TECHNIQUES FOR ENVIRONMENT AND WATERSHED MANAGEMENT**

**Duration:** 6 months

**NSQF Level:** 8

**Course Co-ordinator:** Dr. Raymond Duraiswami

**Technical Assistant:** Mr. Avinash D. Jamdhade

**Objectives:**

- To train the students in watershed management, environment protection and pollution monitoring and allied aspects related to industries.
- To develop skills in identifying, quantifying and analyzing environmental parameters.
- To enhance the knowledge to increase the availability of employment as well as to help the state level agencies and government schemes by using the blend of new techniques with the knowledge.

**Course structure:**

The course consists of lectures and practical training with leading figures from the world of watershed and environment. The course will also include visits to industries, for Environmental Audits, Geological survey, pollution monitoring etc. To complete the course, internships will be organized in organizations operating in the Environment and watershed Management sector. The course will be carried out in collaboration with organizations working in the field. Six months training will be provided that will include 150 hours theory and 300 hours of extensive field work and experimentation.

### Syllabus of the Course:

| <b>Sr no.</b> | <b>Topics of the syllabus</b>           |
|---------------|---|
| 1.            | Introduction to Environment             |
| 2.            | Environmental Audit (Related to water)  |
| 3.            | Water budget and Water audit            |
| 4.            | Water Quality and pollution monitoring  |
| 5.            | Introduction to Survey Methods          |
| 6.            | Exploration Methods and Logging         |
| 7.            | Well Hydraulics and Artificial recharge |
| 8.            | Aquifer Management and PRA Techniques   |
| 9.            | Case Studies and Field Visits           |
| 10.           | Project                                 |

### **Core Team:**

| <b>Sr no.</b> | <b>Name of the Members</b>   |
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| 1             | Dr. N.R. Karmalkar,<br>Professor,<br>Dept. of Geology, SPPU.                                   |
| 2             | Dr. Raymond Duraiswami,<br>Asst. Professor,<br>Dept. of Geology, SPPU                          |
| 3             | Dr. Suresh Gosavi,<br>Head and Professor,<br>Department of Environmental<br>Sciences,<br>SPPU. |
| 4             | Dr. V. Gunale,<br>Emeritus Professor, SPPU   |

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| <b>5</b>  | Dr. Makarand Kale<br>Professor,<br>Dept of Geology, SPPU.        |
| <b>6</b>  | V. S. Patwardhan<br>Environmental Audit Consultant               |
| <b>7</b>  | Dr. V. Krishnamurty,<br>Professor Geology                        |
| <b>8</b>  | Mr. Ramesh Kulkarni<br>Director, SoilTech India Pvt.Ltd.         |
| <b>9</b>  | Dr. N. J. Pawar<br>Professor Geology(Retired)                    |
| <b>10</b> | Mr. N.V. Sharma<br>Geophysicist, GSDA.                           |
| <b>11</b> | Mrs. Swamini Pandit,<br>Environmental Legislation,<br>SPPU, Pune |
| <b>12</b> | Shri. S. M. Deshpande,<br>GSDA(retired),<br>Pune.                |
| <b>13</b> | Mr. Rohit Bhagwat<br>Teaching Associate, Dept. Of<br>EVS, SPPU   |
| <b>14</b> | Mr. Pawan Soyam,<br>Teaching Associate, Dept. Of<br>EVS, SPPU    |
| <b>15</b> | Dr. D.P. Mohanty<br>Asst. Professor,<br>Dept. of Geology, SPPU   |

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| <b>16</b> | Mr. SatishAwate<br>CEE, Pune.  |
| <b>17</b> | Mr. U. R. Patankar<br>Director(retired),<br>GSDA.  |
| <b>18</b> | Mr. ManojChavan<br>CDAC, Pune.   |
| <b>19</b> | Mr. Yogesh Singh<br>CDAC, Pune.  |
| <b>20</b> | Mr.SureshKshirsagar<br>Health and Safety Expert,Pune.  |
| <b>21</b> | Ms.Amruta P. Patil<br>HOD,Department of Civil<br>Engineering,<br>DYPIEMR,Akurdi,Pune.                    |
| <b>22</b> | Mr.Mayur A. Shinde<br>Asst. Professor,<br>Department of Civil<br>Engineering,<br>DYPIEMR,Akurdi,Pune.    |
| <b>23</b> | Mr.Sachin S. Nalawade<br>Asst. Professor,<br>Department of Civil<br>Engineering,<br>DYPIEMR,Akurdi,Pune. |
| <b>24</b> | Mr.Sainand P. Khot<br>Asst. Professor,<br>Department of Civil<br>Engineering,<br>DYPIEMR,Akurdi,Pune.    |
| <b>25</b> | AvinashD.Jamdhade<br>Technical Assistant,DIC,SPPU  |