

| 2 year M.Tech. Course Curricula for Environmental Engineering | | | | | | | |
|---|--------------------------------|--|---------------|-----------|----------|----------|-----------|
| M.Tech. I semester-(M1) | | | | | | | |
| S.No. | Subject Code | Subject | Core/Elective | L | T | P | Credits |
| 1 | 14M12CL121 | Environmental Chemistry and Microbiology | Core | 3 | 0 | 0 | 3 |
| 2 | 14M12CL122 | Environment and Development | Core | 3 | 0 | 0 | 3 |
| 3 | 14M12CL123 | Solid & Hazardous Waste Management | Core | 3 | 0 | 0 | 3 |
| 4 | 14M1GXX14x | Elective-I | Elective | 3 | 0 | 0 | 3 |
| 5 | | Bridge Course | | 3 | 0 | 0 | 3 |
| | 14M12CL124 OR 14M12CE121 | for Civil Engineering Students: Material Balance & Reaction Engineering OR for Chemical Engineering Students: Water Supply & Sewage Treatment | | | 0 | 0 | 3 |
| 6 | 14M18CL181 | Environmental Chemistry and Microbiology lab | Core | 0 | 0 | 4 | 2 |
| | | Total | | 15 | 0 | 4 | 17 |

| List of Electives-I | | | Core/Elective | L | T | P | Credits |
|---------------------|------------|------------------------------|---------------|---|---|---|---------|
| 1 | 14M1GCL141 | Industrial Waste Treatment | Elective | 3 | 0 | 0 | 3 |
| 2 | 14M1GCE141 | Environmental Rules and Laws | Elective | 3 | 0 | 0 | 3 |
| 3 | 14M1GCE142 | Environmental Management | Elective | 3 | 0 | 0 | 3 |
| 4 | 14M1GCL142 | Physicochemical Processes | Elective | 3 | 0 | 0 | 3 |

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|---|--------------|--|---------------|-----------|----------|----------|-----------|
| M.Tech. II semester-(M2) | | | | | | | |
| S.No. | Subject Code | Subject | Core/Elective | L | T | P | Credits |
| 1 | 14M12CL221 | Air & Noise Pollution: Monitoring and Control | Core | 3 | 0 | 0 | 3 |
| 2 | 14M12CL222 | Wastewater Treatment | Core | 3 | 0 | 0 | 3 |
| 3 | 14M12CE221 | Environmental Impact Assessment and Audit | Core | 3 | 0 | 0 | 3 |
| 4 | 14M12CL223 | Modeling and Simulation in Environmental Systems | Core | 3 | 0 | 0 | 3 |
| 5 | 14M1GXX24x | Elective - II | Elective | 3 | 0 | 0 | 3 |
| 6 | 14M18CL281 | Pollution Monitoring Lab | Core | 0 | 0 | 4 | 2 |
| | | Total | | 15 | 0 | 4 | 17 |

| List of Electives-II | | | Core/Elective | L | T | P | Credits |
|-----------------------------|------------|-------------------------------------|---------------|---|---|---|---------|
| 1 | 14M1GCL241 | Membrane Separation Processes | Elective | 3 | 0 | 0 | 3 |
| 2 | 14M1GCL242 | Absorption and Adsorption Processes | Elective | 3 | 0 | 0 | 3 |
| 3 | 14M1GCL243 | Green Rating | Elective | 3 | 0 | 0 | 3 |
| 4 | 14M1GCE241 | Ground water Pollution | Elective | 3 | 0 | 0 | 3 |

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|--|--------------|-----------------|---------------|---|---|---|-----------|
| M.Tech. III semester-(M3) | | | | | | | |
| S.No. | Subject Code | Subject | Core/Elective | L | T | P | Credits |
| 1 | 14M1GXX34x | Elective-III | Elective | 3 | 0 | 0 | 3 |
| 2 | 14M1GXX34x | Elective-IV | Elective | 3 | 0 | 0 | 3 |
| 3 | 14M19GE391 | Project Seminar | Core | 0 | 0 | 0 | 2 |
| 4 | 14M19GE392 | Thesis | Core | - | - | - | 12 |
| | | Total | | | | | 20 |

| List of Electives-III | | | Core/Elective | L | T | P | Credits |
|------------------------------|------------|--|---------------|---|---|---|---------|
| 1 | 14M1GCL341 | Waste Recycling and Reuse | Elective | 3 | 0 | 0 | 3 |
| 2 | 14M1GCE341 | Water Quality and Pollution in natural water systems | Elective | 3 | 0 | 0 | 3 |
| 3 | 14M1GCL342 | Analytical Chemistry and Environmental Instrumentation | Elective | 3 | 0 | 0 | 3 |
| List of Electives-IV | | | Core/Elective | L | T | P | Credits |
| 1 | 14M1GCL341 | Waste Recycling and Reuse | Elective | 3 | 0 | 0 | 3 |
| 2 | 14M1GCE341 | Water Quality and Pollution in natural water systems | Elective | 3 | 0 | 0 | 3 |
| 3 | 14M1GCL342 | Analytical Chemistry and Environmental Instrumentation | Elective | 3 | 0 | 0 | 3 |

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M.Tech. IV semester-(M4)

| S.No. | Subject Code | Subject | Core/Elective | L | T | P | Credits |
|-------|--------------|-----------------|---------------|---|---|---|-----------|
| 1 | 14M1GXX44x | Elective-V | Elective | 3 | 0 | 0 | 3 |
| 2 | 14M1GXX44x | Elective-VI | Elective | 3 | 0 | 0 | 3 |
| 3 | 14M19GE491 | Project Seminar | Core | 0 | 0 | 0 | 2 |
| 4 | 14M19GE492 | Thesis | Core | - | - | - | 14 |
| | | Total | | | | | 22 |

| List of Electives-V | | | Core/Elective | L | T | P | Credits |
|----------------------|------------|---|---------------|---|---|---|---------|
| 1 | 14M1GCE441 | Remote Sensing Applications in Environmental Engineering | Elective | 3 | 0 | 0 | 3 |
| 2 | 14M1GCE442 | Solid Waste management and Land Reclamation | Elective | 3 | 0 | 0 | 3 |
| 3 | 14M1GCL441 | Transport of Pollutants | Elective | 3 | 0 | 0 | 3 |
| List of Electives-VI | | | Core/Elective | L | T | P | Credits |
| 1 | 14M1GCE443 | Introduction to Urban and Rural Environmental Engineering | Elective | 3 | 0 | 0 | 3 |
| 2 | 14M1GCL442 | Energy Resources & Conservation | Elective | 3 | 0 | 0 | 3 |
| 3 | 14M1GCL443 | Process Analysis | Elective | 3 | 0 | 0 | 3 |

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M.Tech. I semester-(M1)

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|-------|--------------------------------|--|---------------|-----------|----------|----------|-----------|
| 1 | 14M12CL121 | Environmental Chemistry and Microbiology | Core | 3 | 0 | 0 | 3 |
| 2 | 14M12CL122 | Environment and Development | Core | 3 | 0 | 0 | 3 |
| 3 | 14M12CL123 | Solid & Hazardous Waste Management | Core | 3 | 0 | 0 | 3 |
| 4 | 14M1GXX14x | Elective-I | Elective | 3 | 0 | 0 | 3 |
| 5 | | Bridge Course | | 3 | 0 | 0 | 3 |
| | 14M12CL124 OR 14M12CE121 | for Civil Engineering Students: Material Balance & Reaction Engineering OR for Chemical Engineering Students: Water Supply & Sewage Treatment | | | 0 | 0 | 3 |
| 6 | 14M18CL181 | Environmental Chemistry and Microbiology lab | Core | 0 | 0 | 4 | 2 |
| | | Total | | 15 | 0 | 4 | 17 |

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|----------------------------|------------|------------------------------|---------------|---|---|---|---------|
| 1 | 14M1GCL141 | Industrial Waste Treatment | Elective | 3 | 0 | 0 | 3 |
| 2 | 14M1GCE141 | Environmental Rules and Laws | Elective | 3 | 0 | 0 | 3 |
| 3 | 14M1GCE142 | Environmental Management | Elective | 3 | 0 | 0 | 3 |
| 4 | 14M1GCL142 | Physicochemical Processes | Elective | 3 | 0 | 0 | 3 |