

**AY2023-24 CURRICULUM FOR BACHELOR OF ENGINEERING (ENVIRONMENTAL ENGINEERING)  
WITH SECOND MAJOR IN SOCIETY & URBAN SYSTEMS - PROFESSIONAL ATTACHMENT  
(FIRST YEAR ADMISSION)**

Last Updated : 22-Feb-24

| SUMMARY OF ACADEMIC UNIT REQUIREMENT |           |          |           |           |           |            |
|--------------------------------------|-----------|----------|-----------|-----------|-----------|------------|
| Year of Study                        | Core      | MPE      | CC        | FC        | BDE       | Total AU   |
| 1                                    | 26        | 0        | 9         | 0         | 3         | 38         |
| 2                                    | 23        | 0        | 8         | 0         | 9         | 40         |
| 3                                    | 12        | 3        | 0         | 10        | 15        | 40         |
| 4                                    | 19        | 0        | 0         | 0         | 8         | 27         |
| <b>Total</b>                         | <b>80</b> | <b>3</b> | <b>17</b> | <b>10</b> | <b>35</b> | <b>145</b> |

\* Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).

| YEAR 1 SEMESTER 1 |  |      |           |               |
|-------------------|--|------|-----------|---------------|
| Course Code       | Course Title   | Type | AU        | Pre-Requisite |
| MH1810            | Mathematics 1  | C    | 3         |               |
| PH1011            | Physics*   | C    | 3         |               |
| FE1073            | An Introduction to Engineering & Practices               | C    | 1         |               |
| CV1011            | Mechanics of Materials                                   | C    | 4         |               |
| CV1012            | Fluid Mechanics  | C    | 3         |               |
| HE9091            | Principles of Economics                                  | BDE  | 3         |               |
| CC0001            | Inquiry and Communication in the Interdisciplinary World | CC   | 2         |               |
| CC0002            | Navigating the Digital World                             | CC   | 2         |               |
|                   |  |      | <b>21</b> |               |

| YEAR 1 SEMESTER 2 |   |      |           |               |
|-------------------|---|------|-----------|---------------|
| Course Code       | Course Title  | Type | AU        | Pre-Requisite |
| MH1811            | Mathematics 2   | C    | 3         | MH1810        |
| CV1014            | Introduction To Computational Thinking                    | C    | 3         |               |
| CV1711            | Engineering Drawing and 3D Building Information Modelling | C    | 1         |               |
| CV2020            | Water Resources Engineering                               | C    | 3         | CV1012        |
| EG1001            | Engineers In Society                                      | C    | 2         |               |
| CC0003            | Ethics & Civics in a Multi-Cultural World                 | CC   | 2         |               |
| CC0005            | Healthy Living & Wellbeing                                | CC   | 3         |               |
|                   |   |      | <b>17</b> |               |

| YEAR 2 SEMESTER 1 |   |      |           |               |
|-------------------|---|------|-----------|---------------|
| Course Code       | Course Title  | Type | AU        | Pre-Requisite |
| EN1001            | Environmental Chemistry                                     | C    | 3         |               |
| EN2004            | Soil Environment and Soil Mechanics                         | C    | 3         |               |
| EN2711            | Environmental Engineering Laboratory A                      | C    | 1         |               |
| MH2814            | Probability & Statistics                                    | C    | 3         | MH1810        |
|                   | Urban Economics & Public Policy 1                           | BDE  | 3         | HE9091        |
| CC0006            | Sustainability: Society, Economy & Environment              | CC   | 3         |               |
| ML0004            | Career and Entrepreneurial Development for the Future World | CC   | 2         |               |
|                   |   |      | <b>18</b> |               |

| YEAR 2 SEMESTER 2 |  |      |    |               |
|-------------------|--|------|----|---------------|
| Course Code       | Course Title                               | Type | AU | Pre-Requisite |
| EN2002            | Environmental Biology and Microbiology     | C    | 3  |               |
| EN2003            | Water Supply Engineering                   | C    | 3  | CV1012        |
| EN2005            | Environmental Health and Safety Management | C    | 3  |               |
| EN2712            | Environmental Engineering Laboratory B     | C    | 1  |               |
| EN3003            | Environmental Transport Processes          | C    | 3  |               |
| SU2001            | Urban Planning & Design                    | BDE  | 3  |               |
|                   | Society and Culture 1                      | BDE  | 3  |               |

|        |                                   |    |           |  |
|--------|-----------------------------------|----|-----------|--|
| CC0007 | Science & Technology for Humanity | CC | 3         |  |
|        |                                   |    | <b>22</b> |  |

| YEAR 3 SEMESTER 1 |  |      |           |                 |
|-------------------|--|------|-----------|-----------------|
| Course Code       | Course Title   | Type | AU        | Pre-Requisite   |
| EN3001            | Solid & Hazardous Waste Management                       | C    | 3         | Year 3 Standing |
| EN3002            | Wastewater Engineering                                   | C    | 3         | Year 3 Standing |
| EN3004            | Air Pollution Control Engineering                        | C    | 3         | Year 3 Standing |
| EN3006            | Energy Resource Engineering                              | C    | 3         |                 |
| CV0003            | Introduction to Data Science and Artificial Intelligence | FC   | 3         | CV1014          |
| HW0288            | Engineering Communication                                | FC   | 2         | CC0001          |
| SU3001            | Integrated Urban Management                              | BDE  | 3         |                 |
|                   |  |      | <b>20</b> |                 |

| YEAR 3 SEMESTER 2 |                                     |      |           |                   |
|-------------------|-------------------------------------|------|-----------|-------------------|
| Course Code       | Course Title                        | Type | AU        | Pre-Requisite     |
| EN4XXX            | Major Prescribed Elective           | MPE  | 3         | Refer to Syllabus |
| SU4001            | Leaders in Urban Systems and Policy | BDE  | 3         |                   |
|                   | Urban Economics & Public Policy 2   | BDE  | 3         | HE9091            |
|                   | Society and Culture 2               | BDE  | 3         |                   |
|                   | Broadening & Deepening Electives 1  | BDE  | 3         |                   |
|                   |                                     |      | <b>15</b> |                   |

| YEAR 3 SPECIAL SEMESTER |                         |      |          |   |
|-------------------------|-------------------------|------|----------|---|
| Course Code             | Course Title            | Type | AU       | Pre-Requisite   |
| EN3910                  | Professional Attachment | FC   | 5        | Year 3 standing & completed at least 4 semesters of study |
|                         |                         |      | <b>5</b> |   |

| YEAR 4 SEMESTER 1 |  |      |           |                 |
|-------------------|--|------|-----------|-----------------|
| Course Code       | Course Title                               | Type | AU        | Pre-Requisite   |
| CV4012            | Project Planning & Management              | C    | 2         | Year 4 Standing |
| EN4001            | Environmental Impact Analysis & Monitoring | C    | 3         |                 |
| EN4711            | Seminars & Site Visits                     | C    | 1         |                 |
| EN4911            | Final Year Project                         | C    | 4         | Year 4 Standing |
|                   | Broadening & Deepening Electives 2         | BDE  | 2         |                 |
|                   |  |      | <b>12</b> |                 |

| YEAR 4 SEMESTER 2 |                                      |      |           |                 |
|-------------------|--------------------------------------|------|-----------|-----------------|
| Course Code       | Course Title                         | Type | AU        | Pre-Requisite   |
| EN4003            | Environmental Systems Analysis       | C    | 2         |                 |
| EN4911            | Final Year Project                   | C    | 4         | Year 4 Standing |
| EN4912            | Integrated Design Project            | C    | 3         | Year 4 Standing |
|                   | Urban Economics & Public Policy 2    | BDE  | 3         | HE9091          |
|                   | Water and Environmental Management 1 | BDE  | 3         |                 |
|                   |                                      |      | <b>15</b> |                 |

Total AU for Graduation : **145**