

**AY2023-24 CURRICULUM FOR BACHELOR OF ENGINEERING (ENVIRONMENTAL ENGINEERING)  
WITH SECOND MAJOR IN SUSTAINABILITY - PROFESSIONAL INTERNSHIP  
(FIRST YEAR ADMISSION)**

Last Updated : 22-Feb-23

| SUMMARY OF ACADEMIC UNIT REQUIREMENT |           |          |           |           |           |            |
|--------------------------------------|-----------|----------|-----------|-----------|-----------|------------|
| Year of Study                        | Core      | MPE      | CC        | FC        | BDE       | Total AU   |
| 1                                    | 26        | 0        | 9         | 0         | 0         | 35         |
| 2                                    | 23        | 0        | 8         | 3         | 6         | 40         |
| 3                                    | 12        | 0        | 0         | 12        | 6         | 30         |
| 4                                    | 19        | 3        | 0         | 0         | 16        | 38         |
| <b>Total</b>                         | <b>80</b> | <b>3</b> | <b>17</b> | <b>15</b> | <b>28</b> | <b>143</b> |

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

^ The Course will be double counted towards Primary Programme and Second Major in Sustainability

| 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 & Practises               | C    | 1         |               |
| CV1011            | Mechanics of Materials                                   | C    | 4         |               |
| CV1012            | Fluid Mechanics  | C    | 3         |               |
| CC0001            | Inquiry and Communication in the Interdisciplinary World | CC   | 2         |               |
| CC0002            | Navigating the Digital World                             | CC   | 2         |               |
|                   |  |      | <b>18</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 |
| CV2011            | Structural Analysis I                                       | C    | 3         | CV1011        |
| 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        |
| CV0003            | Introduction to Data Science and Artificial Intelligence    | FC   | 3         | CV1014        |
| CC0006            | Sustainability: Society, Economy & Environment              | CC   | 3         |               |
| ML0004            | Career and Entrepreneurial Development for the Future World | CC   | 2         |               |
|                   |   |      | <b>21</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            |
| EN2712      | Environmental Engineering Laboratory B | C    | 1         |                   |
| EN3003      | Environmental Transport Processes      | C    | 3         |                   |
| CC0007      | Science & Technology for Humanity      | CC   | 3         |                   |
|             | Sustainability-Core                    | BDE  | 3         | Refer to Syllabus |
|             | Sustainability-Core                    | BDE  | 3         | Refer to Syllabus |
|             |  |      | <b>19</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         |                   |
| HW0288            | Engineering Communication          | FC   | 2         | CC0001            |
|                   | Sustainability-Core                | BDE  | 3         | Refer to Syllabus |
|                   | Sustainability-Elective            | BDE  | 3         | Refer to Syllabus |
|                   |                                    |      | <b>20</b> |                   |

| YEAR 3 SEMESTER 2 |                         |      |           |   |
|-------------------|-------------------------|------|-----------|---|
| Course Code       | Course Title            | Type | AU        | Pre-Requisite   |
| EN3914            | Professional Internship | FC   | 10        | Year 3 standing &<br>completed at least 4<br>semesters of study |
|                   |                         |      | <b>10</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   |
| EN4XXX            | Major Prescribed Elective                  | MPE  | 3         | Refer to Syllabus |
|                   | Sustainability-Core                        | BDE  | 3         | Refer to Syllabus |
|                   | Sustainability-Elective                    | BDE  | 3         | Refer to Syllabus |
|                   |  |      | <b>19</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   |
|                   | Sustainability-Interdisciplinary Project | BDE  | 3         | Refer to Syllabus |
|                   | Sustainability-Elective                  | BDE  | 4         | Refer to Syllabus |
|                   | Sustainability-Elective                  | BDE  | 3         | Refer to Syllabus |
|                   |  |      | <b>19</b> |                   |

Total AU for Graduation : **143**