

## Environmental and Sustainability Engineering

AY2025 cohort

Accurate as of July 2025

| E-Scholars 3-years schedule (ESE)  |   |     |
|--|---|-----|
| Semester 0 (APT)   |   |     |
| EG1311 Design and Make   |   | 4   |
| MA1505 Mathematics I (4 units. It is mapped to MA1511 which is 2 units, + 2 units to UE) |   | 4   |
| CS1010E Programming Methodology  |   | 4   |
| <b>Sub-total</b>   |   | 12  |
| <b>Semester 1</b>  | <b>Semester 2</b>   |     |
| ESE2101 Environmental Engineering Principles & Practices                                 | 4 ESE2102 Principles & Practice in Environmental Monitoring                                 | 4   |
| GEA1000 Quantitative Reasoning with Data   | 4 ESE3301 Microbiology in Natural and Built Environment                                     | 4   |
| DTK1234 Design Thinking  | 4 EE2211 Introduction to Machine Learning or EE2213 Introduction to Artificial Intelligence | 4   |
| MA1513 Linear Algebra with Differential Equations  | 2 MA1512 Differential Equations for Engineering   | 2   |
| PF1101A Project Management and Finance   | 4 UTCP #2   | 4   |
| CE2407A Engineering Uncertainty Analysis   | 2 UE  | 4   |
| UTCP #1  | 4 UE  | 4   |
| <b>Sub-total</b>   | <b>Sub-total</b>  | 26  |
| <b>Semester 3</b>  | <b>Semester 4</b>   |     |
| ESE2001 Environmental Challenges in the Anthropocene                                     | 4   |     |
| ESE3201 Air Quality in Changing Environment  | 4   |     |
| ESE3401 Sustainable Urban Water Technology   | 4   |     |
| ESE2000 Chemistry for An Environmentally Sustainable Future                              | 4 NUS Overseas College (NOC) experience (20 units)*   | 20  |
| CE2134 Fluid Mechanics   | 4   |     |
| UE   | 4   |     |
| UTCP #3 (Replaces CDE2501)   | 4   |     |
| <b>Sub-total</b>   | <b>Sub-total</b>  | 20  |
| <b>Semester 5</b>  | <b>Semester 6</b>   |     |
| ESE4502R B. Eng. Dissertation  | 4 ESE4502R B. Eng. Dissertation   | 4   |
| ESE4501R Design Project  | 4 ESE4408 Environmental Impact Assessment   | 4   |
| Technical Elective   | 4 ESE3101 Resource Management and Circular Economy  | 4   |
| UTCP #4  | 4 Technical Elective  | 4   |
| UE   | 4 UE  | 4   |
| UE   | 4 UE  | 4   |
| UE*  | 2   |     |
| <b>Sub-total</b>   | <b>Sub-total</b>  | 24  |
| <b>Grand total</b>   |   | 160 |

Notes:

1. If APT courses are not cleared, those courses (EG1311, MA1511, CS1010E) must be cleared during the normal semesters
2. Important rules for NOC:
  - You MUST be in Singapore for Visa processing the semester BEFORE going to NOC.
  - You MUST have cleared at least 70 units before applying to NOC
3. \*If not embarking on NOC, alternate course combinations to fulfil Industrial Attachment requirement (10 units) include:
  - a) EG3611A Industrial Attachment (10 units)
  - b) EG3612 Vacation Industrial Attachment / ETP3205 Innovation & Enterprise Internship (6 units) + CDE2605 Undergraduate Research Opportunity (4 units)
  - c) EG3612 Vacation Industrial Attachment / ETP3205 Innovation & Enterprise Internship (6 units) + CFG2101 NUS Vacation Internship Programme (4 units) Note that EG3612 and EG3611A can be done as long as you have cleared 60 units.
  - d) EG3612 Vacation Industrial Attachment / ETP3205 Innovation & Enterprise Internship (6 units) + CDE2605R Undergraduate Research Experience (4 units)

Note that UROP (CDE2605) may be taken in any regular semester or special term as long as you are at seniority 2.

4. If you wish to read Common Curriculum courses before your department's recommended semester, please submit an appeal or select the courses from Round 2.

- courses that require appeal: DTK1234, GEA1000, please email:

DTK1234 - dtk1234@nus.edu.sg

GEA1000 - qradmin@nus.edu.sg