

**AY2024-25 CURRICULUM FOR BACHELOR OF ENGINEERING (ELECTRICAL & ELECTRONIC)
WITH CN YANG SCHOLARS PROGRAMME
SECOND MAJOR IN SUSTAINABILITY (EESN)
(FIRST YEAR ADMISSION)**

Last Updated : 31-Jan-24

| SUMMARY OF ACADEMIC UNIT REQUIREMENT | | | | | | | |
|--------------------------------------|-----------|-----------|-----------|-----------|----------|-----------|------------|
| Year of Study | Core | CNYS-Core | MPE | CC | FC | BDE | Total AU |
| 1 | 9 | 27 | 0 | 5 | 0 | 3 | 44 |
| 2 | 15 | 10 | 0 | 8 | 3 | 3 | 39 |
| 3 | 14 | 0 | 12 | 0 | 5 | 10 | 41 |
| 4 | 8 | 0 | 9 | 0 | 0 | 6 | 23 |
| Total | 46 | 37 | 21 | 13 | 8 | 22 | 147 |

| YEAR 1 SEMESTER 1 | | | | |
|-------------------|------------------------------|----------|-----------|-----------------------|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| CY1001 | Cell | CNY-Core | 3 | CNYS Courses |
| CY1101 | Molecule | CNY-Core | 4 | |
| CY1308 | Physics | CNY-Core | 3 | |
| CY1500 | Introduction to Research | CNY-Core | 2 | |
| CY1601 | Mathematics I | CNY-Core | 4 | |
| EG1001^ | Engineers in Society | C | 2 | |
| CC0002 | Navigating the Digital World | CC | 2 | |
| | | | 20 | |

| YEAR 1 SEMESTER 2 | | | | |
|-------------------|---|----------|-----------|-------------------------------|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| CY1007^ | Climate Change | CNY-Core | 3 | Double-counted as Planet Core |
| CY1602 | Mathematics II | CNY-Core | 4 | CNYS Course |
| IE1005 | From Computational Thinking to Programming | C | 3 | |
| EE1071 | EEE Laboratory 1 | C | 1 | |
| IE2104 | Digital Electronics | C | 3 | |
| CC0005 | Healthy Living & Mental Wellbeing in an Aging Society | CC | 3 | |
| | Second Major Compulsory Course 3 | BDE | 3 | |
| | | | 20 | |

| YEAR 1 SPECIAL SEMESTER | | | | |
|-------------------------|------------------------|----------|----------|-----------------------|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| CY2003 | Research Attachment 3 | CNY-Core | 4 | CNYS Course |
| | Overseas Learning Trip | | | |
| | | | 4 | |

| YEAR 2 SEMESTER 1 | | | | |
|-------------------|---|----------|-----------|-----------------------|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| CY0001 | Writing Across the Disciplines | CNY-Core | 3 | CNYS Course |
| EE0005 | Introduction to Data Science and Artificial Intelligence | FC | 3 | EE1005 |
| EE2101 | Circuit Analysis | C | 3 | |
| IE2106 | Engineering Mathematics I | C | 3 | CY1602 |
| CC0006 | Sustainability: Society, Economy & Environment | CC | 3 | |
| ML0004 | Career and Entrepreneurial Development for the Future World | CC | 2 | |
| CY1307 | Quantum | BDE | 3 | Pre-req for EE2103 |
| | | | 20 | |

| YEAR 2 SEMESTER 2 | | | | |
|-------------------|-----------------------------------|----------|-----------|--|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| CY0002 | Ethics | CNY-Core | 3 | CNYS Course |
| CY2001 | Research Attachment 1 | CNY-Core | 4 | CNYS Course 2-semester long, course registered only in Sem 2 (similar to URECA) |
| EE2102 | Analog Electronics | C | 3 | EE2101 |
| EE2005^ | Electrical Devices & Machines | C | 3 | EE2101 Double-counted as SN Elective |
| IE2110 | Signals and Systems | C | 3 | CY1601/CY1602 |
| SP0061 | Science & Technology for Humanity | CC | 3 | |
| | | | 19 | |

| YEAR 3 SEMESTER 1 | | | | |
|-------------------|----------------------------------|------|----|--|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| EE2103 | Semiconductor Fundamentals | C | 3 | CY1307 |
| IE2108 | Data Structures & Algorithms | C | 3 | |
| EE2073 | Intro to EEE Design & Project | C | 2 | |
| EE3XXX^* | Prescribed Elective 1 | MPE | 3 | Choose: EE3015 to double-count as SN Elective |
| EE4XXX^* | Technical Elective 1 | MPE | 3 | Choose: EE4530/EE4532/EE4533/EE4534 to double count as SN Elective |
| | Second Major Compulsory Course 4 | BDE | 3 | |
| | | | 17 | |

| YEAR 3 SEMESTER 2 | | | | |
|-------------------|------------------------------|------|----|--|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| EE3101 | Engineering Electromagnetics | C | 3 | IE2107 (co-req) |
| EE3180 | Design & Innovation Project | C | 3 | |
| EE3XXX | Prescribed Elective 2 | MPE | 3 | |
| EE4XXX | Technical Elective 2 | MPE | 3 | |
| | SN Elective 3 | BDE | 3 | Please see attached list of electives to choose from |
| | SN Elective 4 | BDE | 4 | |
| | | | 19 | |

| YEAR 3 SPECIAL SEMESTER | | | | |
|-------------------------|-------------------------|------|----|--|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| EE3910 | Professional Attachment | FC | 5 | Y3 standing, completed ≥ 4 semesters of study |
| | | | 5 | |

| YEAR 4 SEMESTER 1 | | | | |
|-------------------|-----------------------------------|------|----|-----------------------|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| EE4081 | CNYSP Overseas Final Year Project | C | 8 | CNYSP Course |
| | | | 8 | |

| YEAR 4 SEMESTER 2 | | | | |
|-------------------|--|------|----|-----------------------|
| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
| EE4XXX | Design Elective 1 | MPE | 3 | |
| EE4XXX | Design Elective 2 | MPE | 3 | |
| EE4XXX | Technical Elective 3 | MPE | 3 | |
| | Second Major Compulsory Course 5 | BDE | 3 | |
| | Second Major Interdisciplinary Project | BDE | 3 | |
| | | | 15 | |

Total AU for Graduation: **147**

^ These courses are double-counted towards both EEE as well as the Second Major in Sustainability

*Students to choose which PE to double count as SN elective. Max number of AUs that can be double counted is 12AUs.

Compulsory Courses and Electives for Second Major in Sustainability

https://www.ntu.edu.sg/ase/admissions/undergraduate-programmes/second-major-in-sustainability#Content_C002_Col00