

**CURRICULUM FOR BACHELOR OF ENGINEERING (CIVIL)  
WITH CN YANG SCHOLARS PROGRAMME  
SECOND MAJOR IN SUSTAINABILITY (CVSN)  
(FIRST YEAR ADMISSION)  
AY2025 Intake Onwards**

SUMMARY OF ACADEMIC UNIT REQUIREMENT								
Year of Study	Major Requirements			Interdisciplinary Collaborative Core			Broadening & Deepening Electives	Total AU
	School Core	CNYSP-Core	MPE	Common Core	Professional Series	Care, Serve, Learn		
1	16 [2]	27 [3]	0	2	0	0	0	45 [5]
2	17	6	0	5	3	3	7	41
3	22	0	0	3	6	0	3	34
4	12	0	3	0	0	0	19	34
<b>Total</b>	<b>67 [2]</b>	<b>33 [3]</b>	<b>3</b>	<b>10</b>	<b>9</b>	<b>3</b>	<b>29</b>	<b>154 [5]</b>

[ ] AU of courses that could be used to fulfil Core requirement and second major requirement concurrently

YEAR 1 SEMESTER 1					
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks	
CY1001	Cell	CNY-Core	3	CNYSP Courses	
CY1101	Molecule	CNY-Core	4		
CY1308	Physics	CNY-Core	3		
CY1500	Introduction to Research	CNY-Core	2		
CY1601	Mathematics I	CNY-Core	4		
CV1011	Mechanics of Materials	C	4		
CV1711	Engineering Drawing and 3D Building Information Modelling	C	1		
			<b>21</b>		

YEAR 1 SEMESTER 2					
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks	
CY1007^	Climate Change	CNY-Core	3	Double-counted as Planet Core CNYSP Courses	
CY1602	Mathematics II	CNY-Core	4		
CV1012	Fluid Mechanics	C	3		
CV1013	Civil Engineering Materials	C	3		
CV1014	Introduction To Computational Thinking	C	3		
EG1001^	Engineers In Society	C	2		
CC0015	Health & Wellbeing	CC	2		
			<b>20</b>		

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

YEAR 2 SEMESTER 1					
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks	
CY0001	Writing Across the Disciplines	CNY-Core	3	CNYSP Course	
CV5915	Undergraduate Research	BDE	IP	Course will be registered in Semester 2. Grades will be recorded at the end of Semester 2	
CV2011	Structural Analysis I	C	3	CV1011	
CV2013	Engineering Geology & Soil Mechanics	C	3		
CV2711	Civil Engineering Laboratory A	C	1		
CV0003	Introduction to Data Science and Artificial Intelligence	PS	3	CV1014	
	Tech-For-Good (T4G)	CSL	3		

	Second Major Compulsory Course 3	BDE	3	<a href="#">Please see attached list of</a>
			19	

#### YEAR 2 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY0002	Ethics	CNY-Core	3	CNYSP Course
CV5915	Undergraduate Research	BDE	4	2-semester long, course registered only in Sem 2
CV2012	Structural Analysis II	C	3	CV2011
CV2014	Geotechnical Engineering	C	3	CV2013
CV2020	Water Resources Engineering	C	3	CV1012
CV2712	Civil Engineering Laboratory B	C	1	
SP0061	Science and Technology for Humanity	CC	3	
CC0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2	
			22	

#### YEAR 3 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CV3011	Reinforced Concrete Design	C	3	CV2011
CV3013	Foundation Engineering	C	3	CV2013 & CV2014
CV3014	Transportation Engineering	C	3	
CV3017	Urban Water Circularity	C	2	CV1012
MH2814	Probability & Statistics	C	3	MH1810
CC0006	Sustainability: Society, Economy & Environment	CC	3	
	Profession Preparation	PS	1	
	Second Major Compulsory Course 4	BDE	3	<a href="#">Please see attached list of</a>
			21	

#### YEAR 3 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CV4211	CNYSP Overseas Final Year Project	C	8	Year 4 Standing
			8	

#### YEAR 3 SPECIAL SEMESTER

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CV3910	Professional Attachment	PS	5	Year 3 standing &
			5	

#### YEAR 4 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CV4012	Project Planning & Management	C	2	Year 4 Standing
CV4711	Seminars on Built Environment	C	1	
CV4XXX	Major Prescribed Elective	MPE	3	Refer to Syllabus
	Second Major Compulsory Course 5	BDE	3	<a href="#">Please see attached list of</a>
	Second Major Interdisciplinary Project	BDE	3	
	SN Elective 1	BDE	3	<a href="#">Please see attached list of</a>
			15	

#### YEAR 4 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CV3012	Steel Design	C	3	CV2011

CV3016	Construction Technology & Processes	C	3	
CV4912	Integrated Design Project	C	3	Year 4 Standing
	SN Elective 2	BDE	3	Please see attached list of electives to choose from
	SN Elective 3	BDE	3	
	SN Elective 4	BDE	4	
			19	
	Total AU for Graduation:		154	

*<sup>^</sup> These courses are double-counted towards both CEE as well as the Second Major in Sustainability.*

**Compulsory Courses and Electives for Second Major in Sustainability**

[https://www.ntu.edu.sg/ase/admissions/undergraduate-programmes/second-major-in-sustainability#Content\\_C002\\_C000](https://www.ntu.edu.sg/ase/admissions/undergraduate-programmes/second-major-in-sustainability#Content_C002_C000)