CURRICULUM FOR BACHELOR OF ENGINEERING (ENVIRONMENTAL ENGINEERING)
WITH CN YANG SCHOLARS PROGRAMME
SECOND MAJOR IN DATA ANALYTICS (ENDA)
(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 [3]	23	0	2	0	0	3	44 [3]
2	17 [3]	6	0	5	3	3	7	41 [3]
3	20	0	0	3	6	0	3	32
4	14	0	3	0	0	0	15	32
Total	67 [6]	29	3	10	9	3	28	149 [6]

[ ] 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	
			21	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY1007	Climate Change	CNY-Core	3	CNYSP Course
CV1012	Fluid Mechanics	C	3	
CV1014^	Introduction To Computational Thinking	C	3	
CV2019	Matrix Algebra & Computational Methods	BDE-DA	3	
EN2002	Microbiological Principles of Environmental Engineering	C	3	
EG1001	Engineers In Society	C	2	
CC0015	Health & Wellbeing	CC	2	
			19	

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			
			4	

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY0001	Writing Across the Disciplines	CNY-Core	3	CNYSP Course
EN5915	Undergraduate Research	BDE	IP	Course will be registered in Semester 2. Grades will be recorded at the end of Semester 2
EN2004	Geo-Environment and Soil Mechanics	C	3	
EN2711	Environmental Engineering Laboratory A	C	1	
MH2814^	Probability & Statistics	C	3	MH1810
MH1403	Algorithms and Computing	BDE-DA	3	CV1014
CV0003	Introduction to Data Science and Artificial Intelligence	PS	3	CV1014
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2	
	Tech-For-Good (T4G)	CSL	3	
			21	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY0002	Ethics	CNY-Core	3	CNYSP Course
EN5915	Undergraduate Research	BDE	4	2-semester long, course registered only in Sem 2
CV2020	Water Resources Engineering	C	3	CV1012
EN2003	Water Supply Engineering	C	3	CV1012
EN2005	Environmental Health and Safety Management	C	3	
EN2712	Environmental Engineering Laboratory B	C	1	
SP0061	Science and Technology for Humanity	CC	3	
			20	

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
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	
CC0006	Sustainability: Society, Economy & Environment	CC	3	
SC4024	Data Visualization	BDE-DA	3	CV1014, MH2814
MLXXXX	Profession Preparation	PS	1	
			19	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
EN4211	CNYSP Overseas Final Year Project	C	8	Year 4 Standing
			8	

YEAR 3 SPECIAL SEMESTER				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
EN3910	Professional Attachment	PS	5	Year 3 standing & completed at least 4 semesters of study
			5	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CV4012	Project Planning & Management	C	2	Year 4 Standing
EN4001	Environmental Impact Analysis & Monitoring	C	3	
EN4711	Seminars on Built Environment	C	1	
EN4XXX	Major Prescribed Elective	MPE	3	Refer to Syllabus
EE4483	Artificial Intelligence & Data Mining	BDE-DA	3	**CV2019, CV0003**
SC2207	Introduction to Database	BDE-DA	3	**MH1403**
XXXXXX	DA Elective 1	BDE-DA	3	
			18	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
EN3003	Environmental Transport Processes	C	3	
EN4003	Environmental Systems Analysis	C	2	
EN4912	Integrated Design Project	C	3	Year 4 Standing
XXXXXX	DA Elective 2	BDE-DA	3	
XXXXXX	DA Elective 3	BDE-DA	3	
			14	
	Total AU for Graduation:		**149**	

^ These courses are double-counted towards both ENE as well as the Second Major in Data Analytics.

Compulsory Courses for Second Major in Data Analytics					
Course Type	Course Code	Course Title	AU	Offering Sem	Pre-req
Core	MH2814	Probability & Statistics	3	1	MH1810
Core	CV1014	Introduction to Computational Thinking	3	2	-
BDE	CV2019	Matrix Algebra & Computational Methods	3	2	-
BDE	MH1403	Algorithms and Computing	3	1 & 2	CV1014
BDE	SC2207	Introduction to Database	3	1, 2	MH1403
BDE	EE4483	Artificial Intelligence & Data Mining	3	1	CV2019, CV0003
BDE	SC4024	Data Visualization	3	1	CV1014, MH2814

Suggested Electives for Second Major in Data Analytics					
Course Type	Course Code	Course Title	AU	Offering Sem	Pre-req
BDE	SC4002	Natural Language Processing	3	1	MH1403
BDE	SC4021	Information Retrieval	3	2	MH1403
BDE	SC4022	Network Science	3	2	MH1403