

CURRICULUM FOR BACHELOR OF ENGINEERING (CHEMICAL AND BIOMOLECULAR ENGINEERING)
WITH CN YANG SCHOLARS PROGRAMME
(FIRST YEAR ADMISSION)
AY2025 Intake Onwards

SUMMARY OF ACADEMIC UNIT REQUIREMENT								
Year of Study	Major Requirements			Interdisciplinary Collaborative Core			BDE	Total AU
	School Core	CNYSP-Core	MPE	CC	Professional Series	Care, Serve, Learn		
1	12	27	0	2	0	0	0	41
2	26	6	0	8	0	3	4	47
3	25	0	0	0	6	0	0	31
4	8	0	6	0	3	0	2	19
Total	71	33	6	10	9	3	6	138

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	
CB1102	Introduction to Chemical and Biomedical Engineering	C	1	
BG1141	Fundamental Biology for Bioengineers	C	3	
			20	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY1007	Climate Change	CNY-Core	3	CNYSP Courses
CY1602	Mathematics II	CNY-Core	4	
CB1103	Organic Chemistry For Engineers	C	3	
CH1104	Materials & Energy Balance	C	3	
EG1001	Engineers in Society	C	2	
CC0015	Healthy & Wellbeing	CC	2	
			17	

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 Courses
CB5915	Undergraduate Research	BDE	IP	Course will be registered in Semester 2. Grades will be recorded at the end of Semester 2
CH2010	Engineering Statistics	C	3	
CH2103	Fluid Systems	C	3	
CH2107	Introduction to Computational Thinking	C	3	
CH2108	Thermodynamics	C	3	
CC0006	Sustainability: Society, Economy & Environment	CC	3	
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2	
	Tech-For-Good (T4G)	CSL	3	
			23	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY0002	Ethics	CNY-Core	3	CNYSP Courses

CB5915	Undergraduate Research	BDE	4	2 semester long, course registered only in Sem 2
CH2112	Chemical Reaction Engineering	C	3	
CH2114	Heat & Mass Transfer in Chemical and Biological Systems	C	3	
CH2123	Chemical Thermodynamics	C	3	
CH2151	Unit Operations: Fluid-Solid Separation	C	3	
CH2802	Chemical & Biomolecular Engineering Laboratory 2B	C	2	
SP0061	Science & Technology for Humanity	CC	3	
			24	

YEAR 3 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CH3104	Biochemical Engineering	C	3	
CH3109	Decision Tools for Business & Engineering	C	3	
CH3111	Process Control and Dynamics	C	3	
CH3121	Chemical, Biological & Plant Safety	C	2	
CH3140	Unit Operations: Fluid-Fluid Separation	C	3	
CH3802	Chemical & Biomolecular Engineering Laboratory 5	C	3	
MLXXXX	Professional Preparation	PS	1	
			18	

YEAR 3 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CH4211	CNYSP Overseas Final Year Project	C	8	CNYSP Course
			8	

YEAR 3 SPECIAL SEMESTER

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CH3910	Professional Attachment	PS	5	
			5	

YEAR 4 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CH4801	Final Year Design Project	C	4	
	CBE PE 1	MPE	3	
			7	

YEAR 4 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CH4801	Final Year Design Project	C	4	
CB0494	Introduction to Data Science and Artificial Intelligence	PS	3	
	CBE PE 2	MPE	3	
XXXXXX	Broadening and Deepening Elective 1	BDE	2	
			12	
Total AU for Graduation :			138	