

**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	10	0	8	0	3	0	47
3	25	0	0	0	6	0	0	31
4	8	0	6	0	3	0	2	19
<b>Total</b>	<b>71</b>	<b>37</b>	<b>6</b>	<b>10</b>	<b>9</b>	<b>3</b>	<b>2</b>	<b>138</b>

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	
			<b>20</b>	

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	
			<b>17</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 Courses
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	
			<b>23</b>	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY0002	Ethics	CNY-Core	3	CNYSP Courses
CY2001	Research Attachment 1	CNY-Core	4	CNYSP Course 2 semester long, course registered only in Sem 2 (similar to URECA)

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	
			<b>24</b>	

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	
			<b>18</b>	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CH4211	CNYSP Overseas Final Year Project	C	8	CNYSP Course
			<b>8</b>	

YEAR 3 SPECIAL SEMESTER				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CH3910	Professional Attachment	PS	5	
			<b>5</b>	

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	
			<b>7</b>	

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	
			<b>12</b>	
Total AU for Graduation :			<b>138</b>	