

**AY2024-25 CURRICULUM FOR BACHELOR OF ENGINEERING (CHEMICAL & BIOMOLECULAR ENGINEERING)
WITH CN YANG SCHOLARS PROGRAMME
(FIRST YEAR ADMISSION)**

Last Updated : 3-May-24

SUMMARY OF ACADEMIC UNIT REQUIREMENT							
Year of Study	Core	CNYS-Core	MPE	CC	FC	BDE	Total AU
1	12	27	0	5	0	0	44
2	26	10	0	8	0	0	44
3	25	0	0	0	5	0	30
4	8	0	6	0	3	3	20
Total	71	37	6	13	8	3	138

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY1001	Cell	CNY-Core	3	CNYS-Core 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	
CB1131	Introduction to Biomolecular Engineering	C	3	
CC0002	Navigating the Digital World	CC	2	
			22	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY1007	Climate Change	CNY-Core	3	CNYS-Core 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	
CC0005	Healthy Living & Mental Wellbeing in an Aging Society	CC	3	
			18	

YEAR 1 SPECIAL SEMESTER				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY2003	Research Attachment 3	CNY-Core	4	CNYS-Core 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-Core Course
CH2103	Fluid Systems	C	3	
CH2107	Introduction to Computational Thinking	C	3	
CH2108	Thermodynamics	C	3	
CH2010	Engineering Statistics	C	3	
CC0006	Sustainability: Society, Economy & Environment	CC	3	
ML0004	Career and Entrepreneurial Development for the Future World	CC	2	
			20	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY0002	Ethics	CNY-Core	3	CNYS-Core Course
CY2001	Research Attachment 1	CNY-Core	4	CNYS-Core 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 A	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 B	C	3	
CH3802	Chemical & Biomolecular Engineering Laboratory 5	C	3	
			17	

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	FC	5	
			5	

YEAR 4 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CH4801	Final Year Design Project	C	4	
CY1307	Quantum	BDE	3	Students can choose to opt out and replace with any other BDE course (3 AU)
	CBE PE 1	MPE	3	
			10	

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	FC	3	
	CBE PE 2	MPE	3	
			10	

Total AU for Graduation : **138**