

B.Eng (Hons) in Chemical and Biomolecular Engineering CNYang Scholars Programme with 2nd Major in Sustainability

AY2024 - 2025 Intake onwards (CBSN CNYSP)

Programme	Year of Study	Number of Academic Units (AU)						
		Major Requirement			Interdisciplinary		Broadening and Deepening Electives (BDE)	Total
		School Core (C)	CNYang Core (C)	Major PE (MPE)	Common Core (CC)	Foundational Core (FC)		
Chemical & Biomolecular Engineering (CNYang)	1	12	27		5		3	47
	2	26	10		8	3		47
	3	25				5		30
	4	8		6			22	36
	Total	71	37	6	13	8	25	160

Category		AU	Total AU	
Interdisciplinary Collaborative Core (ICC)	Common Core (University-level)			
	CC0002 Navigating the Digital World	2	13	
	CC0005 Healthy Living & Wellbeing	3		
	CC0006 Sustainability: Society, Economy & Environment	3		
	SP0061 Science & Technology for Humanity	3		
	ML0004 Career and Entrepreneurial Development for the Future World	2		
	Foundational Core (College-level)			
	CB0494 Introduction to Data Science and Artificial Intelligence	3	8	
	CH3910 Professional Attachment	5		
Major Requirement	CBE Core			
	EG1001^	Engineers In Society	2	30
	CB1102	Introduction to Chemical and Biomedical	1	
	CB1103	Organic Chemistry For Engineers	3	
	CB1131	Introduction to Biomolecular Engineering	3	
	CH1104	Materials & Energy Balance	3	
	CH2010	Engineering Statistics	3	
	CH2103	Fluid Systems	3	
	CH2107	Introduction to Computational Thinking	3	
	CH2108	Thermodynamics	3	
	CH2112	Chemical Reaction Engineering	3	
	CH2114	Systems	3	

Major Requirement	CH2123	Chemical Thermodynamics	3	78	
	CH2151	Unit Operations A	3		
	CH2802	Chemical & Biomolecular Engineering	2		
	CH3104	Biochemical Engineering	3		
	CH3109	Decision Tools for Business & Engineering	3		
	CH3111	Process Control and Dynamics	3		
	CH3121	Chemical, Biological & Plant Safety	2		
	CH3140	Unit Operations B	3		
	CH3802	Chemical & Biomolecular Engineering	3		
	CH4211	CNYSP Overseas Final Year Project	8		
	CH4801	Final Year Design Project	8		
	CNYSP Core				
	CY0001	Writing Across the Disciplines	3		
	CY0002	Ethics	3		
	CY1001	Cell	3		
	CY1007^	Climate Change	3		
	CY1101	Molecule	4		
	CY1308	Physics	3		
	CY1500	Introduction to Research	2		
	CY1601	Mathematics I	4		
	CY1602	Mathematics II	4		
	CY2001	Research Attachment 1	4		
	CY2003	Research Attachment 3	4		
CBE Major Prescribed Electives (MPE)			6		
2nd Major in Sustainability	Sustainability Compulsory Courses				
	Choose 1 Course from EACH of the 5 1) PEOPLE EM5109 Environmental Issue & Sustainability (3AU) ES5006 Environmental Sustainability (3AU) HV5001 Introduction to Environmental Humanities (3AU) 2) Planet CY1007 Climate Change (NA)				
2nd Major in	3) Profit AB0603 Social Entrepreneurship (3AU) HE5091 Principles of Economics (3AU) 4) Practice EG1001 Engineers in Society (NA) 5) Policy			9	
				25	

2nd Major in Sustainability	HU1002 Introduction to Urban Planning (3AU)		
	HA1001 Introduction to International Relations and Foreign Policy (3AU)		
	HA1003 Introduction to Public Administration and Public Policy (3AU)		
	Interdisciplinary Project	3	
	Sustainability Electives	13	
Total			160

^Counted towards 2nd Major in sustainability requirement (total 5AU)

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with Professional Attachment							
Year 1 Semester 1				Year 1 Semester 2			
Course		Type	AU	Course		Type	AU
CB1102	Introduction to Chemical and Biomedical Engineering	C	1	CB1103	Organic Chemistry For Engineers	C	3
CB1131	Introduction to Biomolecular Engineering	C	3	CH1104	Materials & Energy Balance	C	3
CY1001	Cell	C	3	EG1001^	Engineers in Society	C	2
CY1101	Molecule	C	4	CY1007^	Climate Change	C	3
CY1308	Physics	C	3	CY1602	Mathematics 2	C	4
CY1500	Introduction to Research	C	2	CC0005	Healthy Living & Wellbeing	CC	3
CY1601	Mathematics 1	C	4	EM5109	People: Environmental Issue & Sustainability	BDE	3
CC0002	Navigating the Digital World	CC	2				
				Year 1 Special Term			
				CY2003	Research Attachment 3 (Making and Tinkering)		4
				—	Overseas Learning Trip	—	—
			22	25			
Year 2 Semester 1				Year 2 Semester 2			
Course		Type	AU	Course		Type	AU
CH2010	Engineering Statistics	C	3	CH2112	Chemical Reaction Engineering	C	3
CH2103	Fluid Systems	C	3	CH2114	Heat & Mass Transfer in Chemical and Biological Systems	C	3
CH2107	Introduction to Computational Thinking	C	3	CH2123	Chemical Thermodynamics	C	3
CH2108	Thermodynamics	C	3	CH2151	Unit Operations A	C	3
CY0001	Writing Across The Disciplines	C	3	CH2802	Chemical & Biomolecular Engineering Laboratory 2B	C	2
CC0006	Sustainability: Society, Economy & Environment	CC	3	CB0494	Introduction to Data Science and Artificial Intelligence	FC	3
ML0004	Career and Entrepreneurial Development for the Future World	CC	2	CY0002	Ethics	C	3
				CY2001	Research Attachment 1	C	4
				SP0061	Science & Technology for Humanity	CC	3
			20	27			
Year 3 Semester 1				Year 3 Semester 2			
Course		Type	AU	Course		Type	AU
CH3104	Biochemical Engineering	C	3	CH4211	CNYSP Overseas Final Year Project	C	8
CH3109	Decision Tools for Business & Engineering	C	3				
CH3111	Process Control and Dynamics	C	3	Year 3 Special Term			
CH3121	Chemical, Biological & Plant Safety	C	2	CH3910	Professional Attachment	FC	5
CH3140	Unit Operations B	C	3				
CH3802	Chemical & Biomolecular Engineering Laboratory 5	C	3				
			17	13			
Year 4 Semester 1				Year 4 Semester 2			
Course		Type	AU	Course		Type	AU
CH4801	Final Year Design Project	C	4	CH4801	Final Year Design Project	C	4
	CBE PE1	MPE	3		CBE PE2	MPE	3
HA1001	Policy: Introduction to International Relations and Foreign Policy	BDE	3	AB0603	Profit: Social Entrepreneurship	BDE	3
	SN Elective 1	BDE	3		SN Elective 4	BDE	4
	SN Elective 2	BDE	3		Interdisciplinary Project	BDE	3
	SN Elective 3	BDE	3				
			19	17			
				Total (AU)			160

^A These courses are double-counted towards both CBE as well as the Second Major in Sustainability.