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

AY2024 - 2025 Intake onwards (CBSN CNYSP)

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

Category	Category			
	Common	Core (University-level)		
	CC0002 N	2		
	СС0005 Н	ealthy Living & Wellbeing	3	
	CC0006 St	ustainability: Society, Economy & Environment	3	13
	SP0061 Sc	ience & Technology for Humanity	3	
		areer and Entrepreneurial Development for the	2	
Collaborative Core (ICC)	Future Wo	orid		
Core (ICC)	Foundation	onal Core (College-level)		
		troduction to Data Science and Artificial		
	Intelligend		3	8
		rofessional Attachment	5	
	CBE Core			Ī
	EG1001^	Engineers In Society	2	
	CB1102	Introduction to Chemical and Biomedical	1	
	CB1103	Organic Chemistry For Engineers	3	
	CB1131	Introduction to Biomolecular Engineering	3	
Major	CH1104	Materials & Energy Balance	3	30
Requirement	CH2010	Engineering Statistics	3	30
	CH2103	Fluid Systems	3	
	CH2107	Introduction to Computational Thinking	3	
	CH2108	Thermodynamics	3	
	CH2112	Chemical Reaction Engineering	3	
	CH2114	Systems	3	

CH2123					
CH2151		CH2123	Chemical Thermodynamics	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 CH4801 Final Year Design Project 8 CY0002 Ethics 3 CY0002 Ethics 3 CY1001 Cell 3 CY1001 Cell 3 CY1001 Climate Change 3 CY1101 Molecule 4 CY1308 Physics 3 CY1500 Introduction to Research 2 CY1601 Mathematics 4 CY1602 Mathematics 4 CY1602 Mathematics 4 CY2001 Research Attachment 1 4 CY2001 Research Attachment 1 4 CY2001 Research Attachment 3 4 CBE Major Prescribed Electives (MPE) 6 Choose 1 Course from EACH of the 5 1) PEOPLE EM5109 Environmental Issue & Sustainability (3AU) ES5006 Environmental Issue & Sustainability (3AU) ES5006 Environmental Issue & Sustainability (3AU) HV5001 Introduction to Environmental Humanities (3AU) 2) Planet CY1007 Climate Change (NA)		CH2151	Unit Operations A	3	
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 CH3802 Chemical & Biomolecular Engineering 3 CH4211 CNYSP Overseas Final Year Project 8 CH4211 CNYSP Overseas Final Year Project 8 Major Requirement CNYSP Core CY0001 Writing Across the Disciplines 3 CY1001 Cell 3 CY1001 Cell 3 CY1001 Cell 3 CY1001 Molecule 4 CY1308 Physics 3 CY1500 Introduction to Research 2 CY1601 Mathematics I 4 CY2001 Research Attachment 1 4 CY2001 Research Attachment 1 4 CY2001 Research Attachment 1 4 CY2003 Research Attachment 3 4 CBE Major Prescribed Electives (MPE) 6 Sustainability Compulsory Courses Choose 1 Course from EACH of the 5 1) PEOPLE EM5109 Environmental Issue & Sustainability (3AU) HV5001 Introduction to Environmental Humanities (3AU) 2) Planet CY1007 Climate Change (NA)			•		
CH3109					
CH3111					
CH3121					
CH3140			•		
CH3802 Chemical & Biomolecular Engineering 3 CH4211 CNYSP Overseas Final Year Project 8 8 CH4801 Final Year Design Project 8 8 78		CH3121	Chemical, Biological & Plant Safety	2	
CH3802 Chemical & Biomolecular Engineering 3 CH4211 CNYSP Overseas Final Year Project 8 8 CH4801 Final Year Design Project 8 8 78					
CH4211 CNYSP Overseas Final Year Project CH4801 Final Year Design Project Requirement CNYSP Core CY0001 Writing Across the Disciplines CY0002 Ethics CY1001 Cell CY1007^ Climate Change CY1101 Molecule CY1308 Physics CY1500 Introduction to Research CY1601 Mathematics I CY1602 Mathematics II CY2001 Research Attachment 1 CY2003 Research Attachment 3 CBE Major Prescribed Electives (MPE) CBE Major in Sustainability Compulsory Courses Choose 1 Course from EACH of the 5 1) PEOPLE EM5109 Environmental Issue & Sustainability (3AU) ES5006 Environmental Sustainability (3AU) PLOTE TO STATE		CH3140	Unit Operations B	3	
CH4211		CH3802	Chemical & Biomolecular Engineering	3	
CH4801 Final Year Design Project 8					
Major Requirement 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 CY2001 Research Attachment 1 4 CY2003 Research Attachment 1 4 CY2003 Research Attachment 3 4 CBE Major Prescribed Electives (MPE) 6 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)			•		
Requirement CNYSP Core		C114001	Tillal Teal Design Froject		
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CY0002 Ethics 3 3 3 3 3 3 3 3 3	Requirement	CY0001	Writing Across the Disciplines	3	
CY1001 Cell CY1007^ Climate Change CY1101 Molecule CY1308 Physics CY1500 Introduction to Research CY1601 Mathematics I CY1602 Mathematics II CY2001 Research Attachment 1 CY2003 Research Attachment 3 CBE Major Prescribed Electives (MPE) 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)					
CY1007^ Climate Change CY1101 Molecule CY1308 Physics CY1500 Introduction to Research CY1601 Mathematics I CY1602 Mathematics II CY2001 Research Attachment 1 CY2003 Research Attachment 3 CBE Major Prescribed Electives (MPE) 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)					
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CY1308 Physics CY1500 Introduction to Research CY1601 Mathematics I CY1602 Mathematics II CY2001 Research Attachment 1 CY2003 Research Attachment 3 CBE Major Prescribed Electives (MPE) 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)					
CY1500 Introduction to Research CY1601 Mathematics I CY1602 Mathematics II CY2001 Research Attachment 1 CY2003 Research Attachment 3 CBE Major Prescribed Electives (MPE) 6 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)					
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CY1602 Mathematics II CY2001 Research Attachment 1 CY2003 Research Attachment 3 CBE Major Prescribed Electives (MPE) 6 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)		CY1500	Introduction to Research	2	
CY2001 Research Attachment 1 CY2003 Research Attachment 3 CBE Major Prescribed Electives (MPE) 6 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)		CY1601	Mathematics I	4	
CY2003 Research Attachment 3 CBE Major Prescribed Electives (MPE) 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)		CY1602	Mathematics II	4	
CY2003 Research Attachment 3 CBE Major Prescribed Electives (MPE) 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)		CY2001	Research Attachment 1	4	
CBE Major Prescribed Electives (MPE) 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)					
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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)					
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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 Sustainability EM5109 Environmental Issue & Sustainability (3AU) ES5006 Environmental Sustainability (3AU) HV5001 Introduction to Environmental Humanities (3AU) 2) Planet CY1007 Climate Change (NA)		1	-		
2nd Major in Sustainability ES5006 Environmental Sustainability (3AU) HV5001 Introduction to Environmental Humanities (3AU) 2) Planet CY1007 Climate Change (NA)		1 '			
Sustainability HV5001 Introduction to Environmental Humanities (3AU) 2) Planet CY1007 Climate Change (NA)	2 1 1 1 1				
2) Planet CY1007 Climate Change (NA)	-		• • • •		
CY1007 Climate Change (NA)	Sustainability	HV5001 ir	itroduction to Environmental Humanities (3AU)		
CY1007 Climate Change (NA)		2) Dlanet			
		'	insata Changa (NA)		
3) Profit		CY1007 CI	imate Change (NA)		
		3) Profit			
AB0603 Social Entrepreneurshin (3AII)		1 '	ocial Entrepreneurchin (3ALI)		
1		1		9	
HE5091 Principles of Economics (3AU)		LUESOST N	incipies of Economics (SAO)		
4) Practice 25		4) Practice	2		25
EG1001 Engineers in Society (NA)		EG1001 E	ngineers in Society (NA)		
				i	·
5) Policy		E) 5 !:			

Policy (3AU)	o Urban Planning (3AU) o International Relations and Foreign o Public Administration and Public	Sustainability
Interdisciplinary Project 3	rt 3	
Sustainability Electives 13	13	
Total 16	160	-

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

ear 1 Se	emester 1			Year 1 Se	mester 2		
ourse		Туре	AU	Course		Туре	ΑL
B1102	Introduction to Chemical and Biomedical Engineering	С	1	CB1103	Organic Chemistry For Engineers	С	3
B1131	Introduction to Biomolecular Engineering	С	3	CH1104	Materials & Energy Balance	С	3
Y1001 Y1101	Cell Molecule	C C	3 4	EG1001 [^]	,	C	2
Y1308	Physics	С	3	CY1602	Mathematics 2	С	4
Y1500	Introduction to Research	С	2	CC0005	Healthy Living & Wellbeing	CC	3
Y1601	Mathematics 1	С	4	EM5109	People: Environmental Issue & Sustainability	BDE	3
C0002	Navigating the Digital World	CC	2		Cuolamability		
				Year 1 Sp	oecial Term		
				CY2003	Research Attachment 3 (Making and Tinkering)		4
				_	Overseas Learning Trip	_	_
			22				25
	emester 1	_		Year 2 Se	emester 2	_	
H2010	Engineering Statistics	Type C	<u>AU</u> 3	Course CH2112	Chemical Reaction Engineering	Type C	AL 3
H2103	Fluid Systems	С	3	CH2114	Heat & Mass Transfer in Chemical	С	3
H2107	Introduction to Computational Thinking	С	3	CH2123	and Biological Systems Chemical Thermodynamics	С	3
H2108	,		3	CH2151	,	С	3
Y0001	Writing Across The Disciplines	С	3	CH2802	Chemical & Biomolecular	С	2
C0006	Sustainability: Society, Economy &	СС	3	CB0494	Engineering Laboratory 2B Introduction to Data Science and	FC	3
	Environment Career and Entrepreneurial				Artificial Intelligence		
1L0004	Development for the Future World	CC	2	CY0002	Ethics	С	3
				CY2001	Research Attachment 1	С	4
				SP0061	Science & Technology for Humanity	CC	3
			20				27
			20				21
ear 3 Se	emester 1			Year 3 Se	emester 2		
Course		Туре	AU	Course	ONIVOR Overses Firstly	Туре	AL
H3104	Biochemical Engineering	С	3	CH4211	CNYSP Overseas Final Year Project	С	8
H3109	H3109 Decision Tools for Business & Engineering		3				
CH3111	S111 Process Control and Dynamics Chemical, Biological & Plant Safety		3		pecial Term		
CH3121 CH3140	Chemical, Biological & Plant Safety Unit Operations B	C C	2 3	CH3910	Professional Attachment	FC	5
CH3802	Chemical & Biomolecular Engineering	С	3				
	Laboratory 5						
			17	-			13
Year 4 Semester 1 Course		Туре	AU	Year 4 Se Course	emester 2	Туре	Αl
H4801	Final Year Design Project	С	4	CH4801	Final Year Design Project	С	4
	CBE PE1	MPE	3		CBE PE2	MPE	3
A1001	Policy: Introduction to International	BDE	3	AB0603	Profit: Social Entrepreneurship	BDE	3
A1001	Relations and Foreign Policy SN Elective 1	BDE	3	AD0003	SN Elective 4	BDE	3 4
	SN Elective 2	BDE	3		Interdisciplinary Project	BDE	3
	SN Elective 3	BDE	3				
			19				17
					Total (AU)		16

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