

B.Eng (Hons) in Bioengineering CNYang Scholars Programme

AY2025 - 2026 Intake onwards (BIE CNYSP)

Programme	Year of Study	Number of Academic Units (AU)							
		Major Requirement			Interdisciplinary Collaborative Core			Broadening and Deepening Electives (BDE)	Total
		School Core (C)	CNYang Core (C)	Major PE (MPE)	Common Core (CC)	Professional Series (PS)	Care, Serve, Learn (CSL)		
Bioengineering (CNYang)	1	6	27		2				35
	2	27	10		8		3		48
	3	21				6		3	30
	4	9		6		3		7	25
	Total	63	37	6	10	9	3	10	138

Category			AU	Total AU
Interdisciplinary Collaborative Core (ICC)	Common Core (CC)			
	CC0006	Sustainability: Society, Economy & Environment	3	10
	CC0015	Health & Wellbeing	2	
	ML0004	Career Design & Workplace Readiness in the V.U.C.A World	2	
	SP0061	Science & Technology for Humanity	3	
	Professional Series (PS)			
		Introduction to Data Science and Artificial Intelligence	3	9
	CB0494	Intelligence	1	
	MLXXXX	Professional Preparation	5	
	BG3910	Professional Attachment		
	Care, Service, Learn (CSL)			
		Tech-For-Good (T4G)	3	3
Major Requirement	BIE Core			
	EG1001	Engineers In Society	2	25
	CB1102	Introduction to Chemical and Biomedical Engineering	1	
	BG1141	Cellular & Molecular Biology for Bioengineers	3	
	CB2002	Introduction to Chemical and Biological Safety	1	
	BG2103	Signal Processing in Biosystems	3	
	BG2104	Electronics for Biomedical Engineering	3	
	BG2110	Bioelectricity	3	
	BG2119	Anatomy and Physiology	3	
	BG2131	Biomaterials	3	
	BG2142	Biological Thermodynamics	3	

Major Requirement	BG2209	Mechanics for Bioengineers	3	38
	BG2211	Introduction to Computational Thinking	3	
	BG2801	Bioengineering Lab 2A	1	
	BG2802	Bioengineering Lab 2B	1	
	BG3102	Control in Biosystems	3	
	BG3104	Biomedical Imaging	3	
	BG3105	Biomedical Instrumentation	3	
	BG3112	Cardiovascular Engineering	3	
	BG3801	Bioengineering Lab 3	1	
	BG4104	Machine Learning and Optimization for	3	
	BG4122	Medical Device Design	6	37
	BG4211	CNYSP Overseas Final Year 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	
	BIE Major Prescribed Electives (MPE)			
Broadening and Deepening Electives (BDE)				10
Total				138

B.Eng (Hons) in Bioengineering CNYang Scholars Programme
Suggested Study Plan for AY2025-2026 intake
with Professional Attachment (BIE CNYSP)

Year 1 Semester 1

Course		Type	AU
CB1102	Introduction to Chemical and Biomedical Engineering	C	1
BG1141	Cellular & Molecular Biology for Bioengineers	C	3
CY1001	Cell	C	3
CY1101	Molecule	C	4
CY1308	Physics	C	3
CY1500	Introduction to Research	C	2
CY1601	Mathematics 1	C	4

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Year 2 Semester 1

Course		Type	AU
BG2119	Anatomy and Physiology	C	3
BG2131	Biomaterials	C	3
BG2142	Biological Thermodynamics	C	3
BG2211	Introduction to Computational Thinking	C	3
BG2801	Bioengineering Lab 2A	C	1
CY0001	Writing Across The Disciplines	C	3
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2
CC0006	Sustainability: Society, Economy & Environment	CC	3
	Tech-For-Good (T4G)	CSL	3

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Year 3 Semester 1

Course		Type	AU
BG3102	Control in Biosystems	C	3
BG3104	Biomedical Imaging	C	3
BG3105	Biomedical Instrumentation	C	3
BG3112	Cardiovascular Engineering	C	3
BG3801	Bioengineering Lab 3	C	1
MLXXXX	Professional Preparation	PS	1
	BDE 1	BDE	3

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Year 4 Semester 1

Course		Type	AU
BG4104	Machine Learning and Optimization for Bioengineers	C	3
BG4122	Medical Device Design	C	3
	BIE PE 1	MPE	3
	BDE 2	BDE	3

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Year 1 Semester 2

Course		Type	AU
EG1001	Engineers in Society	C	2
CY1007	Climate Change	C	3
CY1602	Mathematics II	C	4
CC0015	Health & Wellbeing	CC	2

Year 1 Special Term

CY2003	Research Attachment 3 (Making and Tinkering)	C	4
—	Overseas Learning Trip	—	—

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Year 2 Semester 2

Course		Type	AU
BG2103	Signal Processing in Biosystems	C	3
BG2104	Electronics for Biomedical Engineering	C	3
BG2110	Bioelectricity	C	3
BG2209	Mechanics for Bioengineers	C	3
BG2802	Bioengineering Lab 2B	C	1
CB2002	Introduction to Chemical and Biological Safety	C	1
CY0002	Ethics	C	3
CY2001	Research Attachment 1	C	4
SP0061	Science & Technology for Humanity	CC	3

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Year 3 Semester 2

Course		Type	AU
BG4211	CNYSP Overseas Final Year Project	C	8

Year 3 Special Term

BG3910	Professional Attachment	PS	5
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Year 4 Semester 2

Course		Type	AU
BG4122	Medical Device Design	C	3
CB0494	Introduction to Data Science and Artificial Intelligence	PS	3
	BIE PE2	MPE	3
	BDE 3	BDE	2
	BDE 4	BDE	2

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Total (AU)

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