

**CURRICULUM FOR COMPUTER ENGINEERING
WITH CN YANG SCHOLARS PROGRAMME
(FIRST YEAR ADMISSION)
AY2026 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	5	4	0	0	48
2	14	6	0	5	0	3	4	32
3	24	0	3	0	6	0	3	36
4	8	0	12	0	0	0	2	22
Total	58	33	15	10	10	3	9	138

YEAR 1 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite
CY1001	The Systems Architecture of Life	CNY-Core	3	CNYSP Courses
CY1101	Molecule	CNY-Core	4	
CY1308	Physics	CNY-Core	3	
CY1601	Mathematics I	CNY-Core	4	
SC1001	Introduction to Computational Thinking & Programming	PS	2	
SC1005	Logic Design	C	3	
NH0007	Critical Perspectives on Technology and Society	CC	3	
			22	

YEAR 1 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite
CY1007	Climate Change	CNY-Core	3	CNYSP Courses
CY1500	Introduction to Research	CNY-Core	2	
CY1602	Mathematics II	CNY-Core	4	
SC1002	AI Foundations	PS	2	
SC1006	Computer Organisation & Architecture	C	3	SC1005
SC1007	Data Structures and Algorithms	C	3	SC1003
SC1008	C and C++ Programming	C	3	SC1003
CC0015	Healthy Living & Wellbeing	CC	2	
			22	

YEAR 1 SPECIAL SEMESTER

Course Code	Course Title	Type	AU	Pre-Requisite
CY2003	Research Attachment 3	CNY-Core	4	CNYSP Course
	Overseas Learning Trip			
			4	

YEAR 2 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite
CY0001	Language & Logic	CNY-Core	3	CNYSP Course
SC5915	Undergraduate Research	BDE	IP	Course will be registered in Semester 2. Grades will be recorded at the end of Semester 2
SC2000	Probability and Statistics for Computing	C	3	
SC2003	Object Oriented Design & Programming	C	2	SC1003 OR SC1007
MH1812	Discrete Mathematics	C	3	
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	CC	2	
NH0001	Tech-for-Good Service Learning	CSL	3	Replaces Care, Serve, Learn
			16	

YEAR 2 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-Requisite
CY0002	Ethics	CNY-Core	3	CNYSP Course
SC5915	Undergraduate Research	BDE	4	2-semester long, course registered only in Sem 2
SC2001	Algorithm Design and Analysis	C	3	SC1007 & MH1812
SC2103	Digital System Design	C	3	SC1005
CC0006	Sustainability: Society, Economy & Environment	CC	3	
			16	

YEAR 3 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-Requisite
SC2005	Operating Systems	C	3	SC1006 & SC1007

SC2006	Software Engineering	C	3	SC2002 (co-requisite)
SC2104	Sensors, Interfacing & Digital Control	C	3	SC1006
SC2107	Microprocessor System Design and Development	C	3	SC1006
EG1001	Engineers in Society	C	2	
MLXXXX	Profession Preparation	PS	1	
			15	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC2008	Computer Networks	C	3	SC2000 & SC1004
SC2079	Multidisciplinary Design Project	C	4	SC2001 & SC2006
SC3102	Signal, Systems and Transform	C	3	SC1004
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	
XXXXXX	Broadening and Deepening Elective 1	BDE	3	
			16	

YEAR 3 SPECIAL SEMESTER				
Course Code	Course Title	Type	AU	Pre-Requisite
SC3910	Professional Attachment	PS	5	
			5	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4211	CNYSP Overseas Final Year Project	C	8	CNYSP Course
			8	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4XXX	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	
SC4XXX	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	
SC4XXX	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	
SC4XXX	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	
XXXXXX	Broadening and Deepening Elective 2	BDE	2	
			14	
Total AU for Graduation:			138	

Important Note:

- Students are required to complete 5 Major Prescribed Electives (MPE) courses, of which at least 4 must be at the SC4xxx level.

MPE Structure for Computer Engineering			
Course Code	Type	AU	Remarks
SC3xxx/SC4xxx	MPE-1	3	Any MPE (Choose within SC3xxx/SC4xxx)
SC4xxx	MPE-2	3	Choose within SC4xxx
SC4xxx	MPE-3	3	Choose within SC4xxx
SC4xxx	MPE-4	3	Choose within SC4xxx
SC4xxx	MPE-5	3	Choose within SC4xxx
	Total	15	
Please refer to the CE MPE Courses and Elective Focus Areas on CCDS intranet.			