

**Curriculum for CN Yang Scholars Programme
Computer Engineering
(For AY2015-16 intake onwards)**

Course Type	AU
Core Courses	110
Major Prescribed Electives	9
GER-Core	15
GER-PE	0
Unrestricted Electives	5
Total	139

Year 1 Semester 1	Course Code	Course Title	Type	AU
	CY1001	Introductory Biology	Core	3
	CY1101	Principles of Modern Chemistry	Core	3
	CY1308	Physics	Core	3
	CY1402	Computing	Core	3
	CY1500	Introductory Research Methodology	Core	3
	CY1601	Mathematics I	Core	4
	GC0001	Introduction to Sustainability: Multidisciplinary Approaches and Solutions	GER-Core	1
	Total AUs			20

Year 1 Semester 2	Course Code	Course Title	Type	AU
	CY1007	Climate Science: Multi-Disciplinary Perspectives	Core	3
	CY1307	Relativity and Quantum Physics	Core	3
	CY1400	CNYPSP Undergraduate Research Experience	Core	3
	CY1602	Mathematics II	Core	4
	CE1003	Introduction to Computational Thinking	Core	3
	CE1005	Digital Logic	Core	3
	ML0001	Absolute Basics for Career	GER-Core	1
	Total AUs			20

Year 1 Special Term	Overseas Educational Trip
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Year 2 Semester 1	Course Code	Course Title	Type	AU
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	CE1006	Computer Organisation & Architecture	Core	3
	CE1007	Data Structures	Core	3
	CE2002	Object Oriented Design and Programming	Core	3
	CE2004	Circuits and Signal Analysis	Core	3
	MH1812	Discrete Mathematics	Core	3
	CY0001	Writing and Reasoning	GER-Core	3
	Total AUs			18

Year 2 Semester 2	Course Code	Course Title	Type	AU
	CY2001	Research Attachment 1	Core	4
	CE2001	Algorithms	Core	3
	CE2003	Digital Systems Design	Core	3
	CE2005	Operating Systems	Core	3
	CE2006	Software Engineering	Core	3
	CY0002	Ethics	GER-Core	3
	Total AUs			19

Year 2 Special Term	Project at Garage
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Year 3 Semester 1	Course Code	Course Title	Type	AU
	CY2002	Research Attachment 2	Core	4
	CE2007	Microprocessor-based Systems Design	Core	3
	CE3001	Advanced Computer Architecture	Core	3
	CE3002	Sensors, Interfacing and Control	Core	3
	CE3004	Multidisciplinary Design Project	Core	4
	CY0006	Enterprise, Innovation and Leadership	GER-Core	3
	ML0002	Career Power Up	GER-Core	1
	Total AUs			21

Year 3 Semester 2	Course Code	Course Title	Type	AU
	CE3003	Microcontroller Programming	Core	3
	CE3005	Computer Networks	Core	3
	CE3006	Digital Communications	Core	3
	CE3007	Digital Signal Processing	Core	3
	xxxxxx	Unrestricted Elective	UE	3
	CE0001	Engineers and Society	GER-Core	3
	Total AUs			18

Year 3	Course	Course Title	Type	AU
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Special Term	Code			
	CY3001	Professional Attachment	Core	4
				Total AUs 4

Year 4 Semester 1	Course Code	Course Title	Type	AU
	CY4002	Final Year Project 2	Core	8
				Total AUs 8

Year 4 Semester 2	Course Code	Course Title	Type	AU
	CE4xxx	Major PE 1	Major PE	3
	CE4xxx	Major PE 2	Major PE	3
	CE4xxx	Major PE 3	Major PE	3
	xxxxxx	Unrestricted Elective	UE	2
	Total AUs			11
GRAND TOTAL			139	

Table A: School Core (58 AUs)

School Core (58 AUs)	Type	AU
CE1003 Introduction to Computational Thinking	Core	3
CE1005 Digital Logic	Core	3
CE1006 Computer Organisation & Architecture	Core	3
CE1007 Data Structures	Core	3
CE2001 Algorithms	Core	3
CE2002 Object Oriented Design and Programming	Core	3
CE2003 Digital Systems Design	Core	3
CE2004 Circuits and Signal Analysis	Core	3
CE2005 Operating Systems	Core	3
CE2006 Software Engineering	Core	3
CE2007 Microprocessor-based Systems Design	Core	3
CE3001 Advanced Computer Architecture	Core	3
CE3002 Sensors, Interfacing and Control	Core	3
CE3003 Microcontroller Programming	Core	3
CE3004 Multidisciplinary Design Project	Core	4
CE3005 Computer Networks	Core	3
CE3006 Digital Communications	Core	3
CE3007 Digital Signal Processing	Core	3
MH1812 Discrete Mathematics	Core	3