

**Bachelor of Engineering (Materials Engineering)
CNYang Scholars Programme (AY2022-23)**

Academic Unit (AU) Required for graduation

Year of Study	Core	CNYS Core	MPE	CC	FC	BDE	Total AU
1	7	27	-	5	-	3	42
2	14	10	-	8	-	3	35
3	28	-	-	-	8	-	36
4	15	-	9	-	-	-	24
	64	37	9	13	8	6	137

Year 1 - Semester 1

Course Code and Title	Course Type	AU
CC0005 Healthy Living & Wellbeing	CC	3
CY1001 Cell	CNYS Core	3
CY1101 Molecule	CNYS Core	4
CY1308 Physics	CNYS Core	3
CY1500 Introduction to Research	CNYS Core	2
CY1601 Mathematics I	CNYS Core	4
Total		19

Year 1 - Semester 2

Course Code and Title	Course Type	AU
CC0002 Navigating the Digital World	CC	2
EG1001 Engineer & Society	Core	2
CY1007 Climate Change	CNYS Core	3
CY1602 Mathematics II	CNYS Core	4
MS1014 Materials Chemistry II	Core	2
MS2013 Introduction to Polymer Science	Core	3
BDE1	Core	3
Total		19

Year 1 - Special Term		
Course Code and Title	Course Type	AU
CY2003 Research Attachment 3 (Overseas Learning Trip)	CNYS Core	4
Total		4

Year 2 - Semester 1		
Course Code and Title	Course Type	AU
CC0007 Science & Technology for Humanity	CC	3
CY0002 Ethics	CNYS Core	3
CY1307 Quantum	BDE (Optional i.e. students can take any other BDE)	3
MS1017 Introduction to Materials Science	Core	2
MS1008 Introduction to Computational Thinking	Core	3
Total		14

Year 2 - Semester 2		
Course Code and Title	Course Type	AU
ML0004 Career and Entrepreneurial Development for the Future World	CC	2
CC0006 Sustainability: Society, Economy & Environment	CC	3
CY0001 Writing Across the Disciplines	CNYS Core	3
CY2001 Research Attachment 1	CNYS Core	4
MS1018 Properties of Materials	Core	2
MS1016 Thermodynamics of Materials	Core	3
MS2083 Laboratory on Structure-Property Relationship in Polymers	Core	1
MS2012 Introduction to Manufacturing Processes	Core	3
Total		21

Year 3 - Semester 1		
Course Code and Title	Course Type	AU
MS2014 Materials Structure and Defects	Core	3
MS2015 Mechanical Behaviour of Materials	Core	3
MS2016 Phase Transformation and Kinetics	Core	3
MS2018 Electronic & Magnetic Properties of Materials	Core	3

MS3012 Micro/Nanoelectronic Materials Processing	Core	3
MS3082 Design Lab	Core	1
Total		16

Year 3 - Semester 2		
Course Code and Title	Course Type	AU
MS0003 Introduction to Data Science and Artificial Intelligence	FC	3
MS3011 Metallic & Ceramic Materials	Core	3
MS3013 Corrosion of Materials	Core	3
MS3014 Analysis of Materials	Core	3
MS3015 Industrial Design	Core	3
Total		15

Year 3 - Special Term		
Course Code and Title	Course Type	AU
MS3096 Professional Attachment	FC	5
Total		5

Year 4 - Semester 1		
Course Code and Title	Course Type	AU
MS4211 CNYSP Overseas FYP	Core	8
Total		8

Year 4 - Semester 2		
Course Code and Title	Course Type	AU
MS4012 Quality Control	Core	3
MS4013 Biomaterials	Core	2
MS4014 Nanomaterials: Fundamentals And Applications	Core	2
MPE1	MPE	3
MPE2	MPE	3
MPE3	MPE	3
Total		16

Total AU for Graduation	137
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