

**CURRICULUM FOR BACHELOR OF SCIENCE (PURE PHYSICS)  
WITH SECOND MAJOR IN QUANTUM TECHNOLOGY  
CN YANG SCHOLARS PROGRAMME  
(FIRST YEAR ADMISSION)  
AY2025 Intake Onwards**

SUMMARY OF ACADEMIC UNIT REQUIREMENT								
Year of Study	Core	CNYSP-Core	MPE	CC	Professional Series	Care, Serve & Learn	BDE	Total AU
1	10	27	0	4	0	0	3	<b>44</b>
2	18	6	0	6	3	3	11	<b>47</b>
3	13	0	3	0	1	0	22	<b>39</b>
4	12	0	0	0	10	0	0	<b>22</b>
<b>Total</b>	<b>53</b>	<b>33</b>	<b>3</b>	<b>10</b>	<b>14</b>	<b>3</b>	<b>36</b>	<b>152</b>

YEAR 1 SEMESTER 1						
Course Code	Course Title			Type	AU	Remarks
CY1001	Cell			CNYSP-Core	3	
CY1101	Molecule			CNYSP-Core	4	
CY1308	Physics			CNYSP-Core	3	
CY1500	Introduction to Research			CNYSP-Core	2	
CY1601	Mathematics I			CNYSP-Core	4	
PS0001	Introduction to Computational Thinking			C	3	
PH1198	Physics Laboratory Ia			C	2	
CC0015	Health & Wellbeing			CC	2	
					<b>23</b>	

YEAR 1 SEMESTER 2						
Course Code	Course Title			Type	AU	Remarks
CY1007	Climate Change			CNYSP-Core	3	
CY1602	Mathematics II			CNYSP-Core	4	
PH1107	Relativity and Quantum Physics			C	3	
PH1199	Physics Laboratory Ib			C	2	
ML0004	Career Design & Workplace Readiness in the V.U.C.A World			CC	2	
	Broadening and Deepening Elective 1			BDE	3	
					<b>17</b>	

YEAR 1 SPECIAL TERM						
Course Code	Course Title			Type	AU	Remarks
CY2003	Research Attachment 3 (Making and Tinkering)			CNYSP-Core	4	
	Overseas Learning Trip					
					<b>4</b>	

YEAR 2 SEMESTER 1						
Course Code	Course Title			Type	AU	Remarks
CY0001	Writing Across The Disciplines			CNYSP-Core	3	
PH5915	Undergraduate Research			BDE	IP	Course will be registered in Semester 2. Grades will be recorded at the end of Semester 2
PH1105	Optics, Vibrations & Waves			C	3	
PH2102	Electromagnetism			C	4	
PH2104	Analytical Mechanics			C	4	CY1602 & CY1308
PH2198	Physics Lab IIA			C	2	PH1198
MH2500	Probability and Introduction to Statistics			BDE	<b>4</b>	Required second major course
	Tech-For-Good			CSL	3	
CC0006	Sustainability: Society, Economy & Environment			CC	3	
					<b>26</b>	

YEAR 2 SEMESTER 2						
Course Code	Course Title			Type	AU	Remarks
CY0002	Ethics			CNYSP-Core	3	
PH5915	Undergraduate Research			BDE	4	2-semester long, course registered only in Sem 2
PH2101	Quantum Mechanics 1			C	3	CY1601 & CY1602 & PH1107

PH2199	Physics Lab IIB	C	2	
PH2301	Physical Optics	BDE	3	Required second major course
PS0002	Introduction to Data Science and Artificial Intelligence	PS	3	
SP0061	Science & Technology for Humanity	CC	3	
			<b>21</b>	

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Remarks
PH2103	Thermal Physics	C	4	
PH3101	Quantum Mechanics II	C	4	MH2801 & PH2101
PH3103	Technological Applications of Quantum Mechanics	C	3	PH2101
PH3199	Physics Laboratory IIIa	C	2	PH2198 & PH2199
PH3XXX	Quantum Hardware	BDE	3	Required second major course
QT	QT Elective 1	BDE	4	<a href="#">Elective List</a>
MLXXXX	Profession Preparation	PS	1	
			<b>21</b>	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Remarks
PHXXXX	Physics Prescribed Elective 1	MPE	3	
QT	QT Elective 2	BDE	4	
QT	QT Elective 3	BDE	4	<a href="#">Elective List</a>
PH3404	Physics of Classical and Quantum Information	BDE	3	Required second major course
PH3406	Open Quantum Systems	BDE	4	Required second major course
			<b>18</b>	

YEAR 3 SPECIAL SEMESTER & YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Remarks
PH4111	Overseas Final Year Project	C	12	
			<b>12</b>	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Remarks
PH4420	Professional Internship	PS	10	
			<b>10</b>	
Total AUs required for Graduation:				<b>152</b>

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4	12	0	0	0	10	0	0	<b>22</b>
<b>Total</b>	<b>52</b>	<b>33</b>	<b>3</b>	<b>10</b>	<b>14</b>	<b>3</b>	<b>36</b>	<b>151</b>

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PH5915	Undergraduate Research		BDE	IP	Course will be registered in Semester 2. Grades will be recorded at the end of Semester 2
PH1105	Optics, Vibrations & Waves		C	3	
PH2102	Electromagnetism		C	4	
PH2198	Physics Lab IIA		C	2	PH1198
MH2500	Probability and Introduction to Statistics		BDE	4	Required second major course
	Tech-For-Good		CSL	3	
CC0006	Sustainability: Society, Economy & Environment		CC	3	
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PH2199	Physics Lab IIB	C	2	PH1199
PH2301	Physical Optics	C	3	PH1105
PS0002	Introduction to Data Science and Artificial Intelligence	PS	3	PS0001
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QT	QT Elective 2	BDE	3	
QT	QT Elective 3	BDE	4	
QT	QT Elective 4	BDE	4	
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