

**AY2022-23 CURRICULUM FOR PHYSICS AND APPLIED PHYSICS
WITH CN YANG SCHOLARS PROGRAMME_Internship
(FIRST YEAR ADMISSION)**

Last Updated : 13-Oct-22

SUMMARY OF ACADEMIC UNIT REQUIREMENT

| Year of Study | Core | CNYS-P-Core | MPE | CC | FC | BDE | Total AU |
|---------------|-----------|-------------|----------|-----------|-----------|----------|------------|
| 1 | 7 | 27 | 0 | 5 | 0 | 0 | 39 |
| 2 | 18 | 13 | 0 | 8 | 3 | 0 | 42 |
| 3 | 13 | 0 | 9 | 0 | 0 | 9 | 31 |
| 4 | 12 | 0 | 0 | 0 | 10 | 0 | 22 |
| Total | 50 | 40 | 9 | 13 | 13 | 9 | 134 |

YEAR 1 SEMESTER 1

| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
|-------------|--|----------|-----------|-----------------------|
| CY1001 | Cell | CNY-Core | 3 | CNYS Courses |
| CY1101 | Molecule | CNY-Core | 4 | |
| CY1308 | Physics | CNY-Core | 3 | |
| CY1500 | Introduction to Research | CNY-Core | 2 | |
| CY1601 | Mathematics I | CNY-Core | 4 | |
| PS0001 | Introduction to Computational Thinking | C | 3 | |
| PH1198 | Physics Laboratory Ia | C | 2 | |
| CC0002 | Navigating the Digital World | CC | 2 | |
| | | | 23 | |

YEAR 1 SEMESTER 2

| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
|-------------|---|----------|-----------|-----------------------|
| CY1007 | Climate Change | CNY-Core | 3 | CNYS Courses |
| CY1602 | Mathematics II | CNY-Core | 4 | |
| PH1199 | Physics Laboratory Ib | C | 2 | |
| CC0005 | Healthy Living & Mental Wellbeing in an Aging Society | CC | 3 | |
| | | | 12 | |

YEAR 1 SPECIAL SEMESTER

| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
|-------------|------------------------|----------|----------|-----------------------|
| CY2003 | Research Attachment 3 | CNY-Core | 4 | CNYS Course |
| | Overseas Learning Trip | | | |
| | | | 4 | |

YEAR 2 SEMESTER 1

| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
|-------------|---|----------|-----------|---|
| CY0002 | Ethics | CNY-Core | 3 | CNYS Course |
| CY1307 | Quantum | CNY-Core | 3 | Core for CNYS-PHY as it is a pre-req for advanced courses |
| PH2102 | Electromagnetism | C | 4 | |
| PH2103 | Thermal Physics | C | 4 | |
| PH2198 | Physics Lab IIa | C | 2 | |
| PH1105 | Optics, Vibrations and Waves | C | 3 | |
| ML0004 | Career and Entrepreneurial Development for the Future World | CC | 2 | |
| | | | 21 | |

YEAR 2 SEMESTER 2

| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
|-------------|--|----------|-----------|--|
| CY0001 | Writing Across the Disciplines | CNY-Core | 3 | CNYS Course |
| CY2001 | Research Attachment 1 | CNY-Core | 4 | CNYS Course 2-semester long, course registered only in Sem 2 (similar to URECA) |
| PH2101 | Quantum Mechanics I | C | 3 | |
| PH2199 | Physics Lab IIb | C | 2 | |
| PS0002 | Introduction to Data Science and Artificial Intelligence | FC | 3 | |
| CC0006 | Sustainability: Society, Economy & Environment | CC | 3 | |
| CC0007 | Science & Technology for Humanity | CC | 3 | |
| | | | 21 | |

YEAR 3 SEMESTER 1

| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
|-------------|---|------|-----------|-----------------------|
| PH2104 | Analytical Mechanics | C | 4 | |
| PH3101 | Quantum Mechanics II | C | 4 | |
| PH3103 | Technological Applications of Quantum Mechanics | C | 3 | |
| PH4XXX | School Major PE | MPE | 3 | |
| XXXXXX | Broadening and Deepening Electives 1 | BDE | 3 | |
| | | | 17 | |

YEAR 3 SEMESTER 2

| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
|-------------|--------------------------------------|------|-----------|-----------------------|
| PH3199 | Physics Laboratory IIIa | C | 2 | |
| PH4XXX | School Major PE | MPE | 3 | |
| PH4XXX | School Major PE | MPE | 3 | |
| XXXXXX | Broadening and Deepening Electives 2 | BDE | 3 | |
| XXXXXX | Broadening and Deepening Electives 3 | BDE | 3 | |
| | | | 14 | |

YEAR 3 SPECIAL SEMESTER & YEAR 4 SEMESTER 1

| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
|-------------|-----------------------------|------|-----------|-----------------------|
| PH4111 | Overseas Final Year Project | C | 12 | CNYS Course |
| | | | 12 | |

YEAR 4 SEMESTER 2

| Course Code | Course Title | Type | AU | Pre-Requisite/Remarks |
|-------------|-------------------------|------|-----------|-----------------------|
| PH4420 | Professional Internship | FC | 10 | |
| | | | 10 | |

Total AU for Graduation : **134**