

Primary Physics Major Study Plan for students who are interested in Solid State Physics and wish to pursue a career in industry							
Year 1		Year 2		Year 3		Year 4	
Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2	Sem 1	Sem 2
Pair 1: Integrated Course in Social Sciences Pair 2: Integrated Course in Humanities	Pair 1: Integrated Course in Humanities Pair 2: Integrated Course in Social Sciences	Writing	Scientific Inquiry II	Communities and Engagement	Interdisciplinary II	Major 14	Major 15
Pair 1: Scientific Inquiry I Pair 2: Integrated Course in Asian Studies	Pair 1: Integrated Course in Asian Studies Pair 2: Scientific Inquiry I	Digital Literacy	Artificial Intelligence	Interdisciplinary I	PC3193 Experimental Physics II	UE 5	UE 9
Pair A: Data Literacy Pair B: Design Thinking	Pair A: Design Thinking Pair B: Data Literacy	PC2031 Electricity & Magnetism I	PC2130 Quantum Mechanics I	PC2135 Thermodynamics and Statistical Mechanics	PC3270 Machine Learning for Physicists / New AI Course	UE 6	UE 10
PC1101 Frontiers of Physics	PC2174A Mathematical Methods in Physics I	PC2032 Classical Mechanics I	PC2193 Experimental Physics and Data Analysis	PC3231 Electricity & Magnetism II	UE 3	UE 7	UE 11
Major B Gateway Course (UE 1)	Major C Gateway Course (UE 2)	PC3274A Mathematical Methods in Physics II	PC3233 Atomic and Molecular Physics I	PC3235 Solid State Physics I	UE 4	UE 8	UE 12

Note: Students have to complete all CHS Common Curriculum courses in their first two years except for the following 3 courses:

- Communities and Engagement course – can be taken from Years 2 to 4
- Two Interdisciplinary courses – can be taken in Years 3 and 4

Graduation Requirements

Students must take at least one of the following courses in the UE space to fulfil the graduation requirements. It is recommended to take UPIP during a special term.

- PC3288 (or its variants) Advanced UROPS in Physics I
- PC4288 (or its variants) Honours Project in Physics (8 Units)
- PC UPIP course (minimum 4 Units, advised to be taken during a special term)
- NOC Internship Course

List of Elective Courses

A range of industry relevant courses are offered. Students can choose the elective courses from the following depending on their interest.

- PC3221 Fundamentals of Quantum Information and Computation
- PC3236 Computational Methods in Physics
- PC3241 Solid State Devices
- PC3242 Nanofabrication and Nanocharacterization
- PC3243 Photonics
- PC3247 Modern Optics
- PC3251 Nanophysics
- PC4228 Device Physics for Quantum Technology
- PC4236 Computational Condensed Matter Physics
- PC4240 Solid State Physics II
- PC4246 Quantum Optics
- PC4253 Thin Film Technology
- PC4262 Remote Sensing

Please note that not all courses are offered in every academic year.

Students are also encouraged to read a second major or a minor from other disciplines. Please consult your academic mentor for advices.