

Study Plan of MPhil - PhD Programme

Programme Title: MPhil-PhD in Physics

Offered by: School of Science and Engineering

1. Target Participants

The Programme is designed for students who wish to pursue a higher degree in the broad area of Physics (PHY), with a research focus on condensed matter physics, semiconductor physics, statistic physics, surface and interface physics, computational physics, and quantum physics. An applicant with a research master's degree should apply for admission to the PhD Stream, while an applicant with a bachelor's degree can apply for admission to either MPhil or PhD Stream. Applicants should have an educational background in science and engineering.

2. Programme Information

Study Mode: Full Time

Study Period: The study period for students of different streams / stages under the framework of the new MPhil-PhD Programmes are summarized below:

Degree	Mode	Maximum Pre-Candidacy Period ¹	Normative Period	Maximum Period
MPhil	FT	--	24 months	48 months
PhD (entering with a research master's degree)	FT	24 months	48 months	72 months
PhD (entering without a research master's degree)	FT	36 months	60 months	84 months

¹ Maximum period to pass the candidacy requirement, counted from first entry.

Requirement for MPhil Students

1. Course Requirement

MPhil students within Normative Study Period (2 years)	Lecture Courses	3 units × 6 courses = 18 units
	Thesis Research Course -PHY8003 Thesis Research-	6 units × 4 terms = 24 units
	Other Course -PHY6431 Research Seminars-	0 units × 4 terms = 0 units
	Civic Education Courses	Refer to the official notice from HSS
MPhil Students Exceeding Normative Study Period (2 years)	Thesis Research Course -PHY8003 Thesis Research-	6 units × 4 terms = 24 units

1.1. Lecture Courses

1.1.1. Course Requirement

- Minimum of 18 units are required from the following list of lecture courses, with **at least 6 units to be selected from Group A** and the rest from Group B. Course list can be found in the appendix.
- Up to 3 courses from Group B can be replaced by courses in other postgraduate programmes at CUHK(SZ) subject to the endorsement by supervisors and the approval by Graduate Panel.

1.1.2. Course Exemption

- Students may be granted exemption from courses if they have taken similar or equivalent postgraduate courses with satisfactory performance (“B” grade or above). Supporting documents such as academic transcripts, course syllabus must be provided. Exemption for a maximum of 6 units may be granted. Applications will be assessed individually and subject to the University’s final approval.

1.2. Thesis Research Course

Students **MUST** register for thesis research courses in each term (summer term excluded), and submit a research progress report in the end of each term (summer term excluded). The minimum requirement is listed below.

Course code	Course Title	Units	Contact Hours	Minimum Grade
PHY8003	Thesis Research	6	84	B-
A student is required to meet with his/her supervisor regularly who provides necessary guidance and supervision on the student’s thesis research and monitors his/her academic progress. The minimum grade requirement of this course is “B-”.				

1.3. Other Courses

Starting from AY2024-25, students are required to register for Research Seminars course in each term (summer term excluded) and complete **at least 5 seminar attendances before the end of each term** (summer term excluded) related to your own major and record your attendance via <https://docs.qq.com/form/page/DSUhkTUVZdGljSmlL?u=f1cfee0bf8f64d4dbdd1e95108014a6b#/fill>.

Course code	Course Title	Units	Contact Hours	Minimum Grade
PHY6431	Research Seminars	0	--	Pass

1.4. Civic Education

Please refer to the official notice from HSS.

2. Progress towards Graduation

Please refer to 5. Progress towards Graduation in Code of Practice.

3. Other Information

Code of Practice Research Postgraduate Studies refers to <https://gs.cuhk.edu.cn/RPG>

Requirement for PhD Students

1. Course Requirement

PhD candidates have to complete a minimum number of units for lecture courses and thesis research courses (every term) during the pre-candidacy and candidacy stage. However, since the study period of students may vary, the total number of thesis research courses to be taken may also vary, which will affect the total number of units taken by each student for graduation.

- For PhD students **with** a research master's degree, total number of units required for graduation within normative study period is:

Pre-candidacy Stage (2 years)	Lecture Courses	3 units × 9 courses = 27 units
	Thesis Research Course <i>-PHY8003 Thesis Research-</i>	6 units × 4 terms = 24 units
	Other Course <i>-PHY6431 Research Seminars-</i>	0 units × 4 terms = 0 units
	Civic Education Courses	Refer to the official notice from HSS
Candidacy Stage (2 years)	Thesis Research Course <i>-PHY8003 Thesis Research-</i>	12 units × 4 terms = 48 units
	Other Course <i>-PHY6431 Research Seminars-</i>	0 units × 4 terms = 0 units
	Civic Education Courses	Refer to the official notice from HSS
PhD Students Exceeding Normative Study Period (2 years)	Thesis Research Course <i>-PHY8003 Thesis Research-</i>	12 units × 4 terms = 48 units
	Other Course <i>-PHY6431 Research Seminars-</i>	0 units × 4 terms = 0 units

- For PhD students **without** a research master's degree, total number of units required for graduation within normative study period is:

Pre-candidacy Stage (3 years)	Lecture Courses	3 units × 9 courses = 27 units
	Thesis Research Course <i>-PHY8003 Thesis Research-</i>	6 units × 6 terms = 36 units
	Other Course <i>-PHY6431 Research Seminars-</i>	0 units × 6 terms = 0 units
	Civic Education Courses	Refer to the official notice from HSS
Candidacy Stage (2 years)	Thesis Research Course <i>-PHY8003 Thesis Research-</i>	12 units × 4 terms = 48 units
	Other Course <i>-PHY6431 Research Seminars-</i>	0 units × 4 terms = 0 units
	Civic Education Courses	Refer to the official notice from HSS
PhD Students Exceeding Normative Study Period (2 years)	Thesis Research Course <i>-PHY8003 Thesis Research-</i>	12 units × 4 terms = 48 units
	Other Course <i>-PHY6431 Research Seminars-</i>	0 units × 4 terms = 0 units

1.1. Lecture Courses

1.1.1. Course Requirement

- A student will have to complete 27 units of lecture courses as part of the candidacy requirement, with **at least 6 units of Group A** and the rest from Group B. The course list can be found in the appendix.
- **Up to 4 courses from Group B can be replaced by courses in other postgraduate programmes at CUHK(SZ)** subject to the endorsement by supervisors and the approval by Graduate Panel.

1.1.2. Course Exemption

- Students can submit the prescribed application form with any required supporting documents and apply for exemption for at most three courses (up to 9 units) from Group B. The application should be approved by the Dean of the Graduate School after the endorsement of the Programme Coordinator and the Panel Chair.

1.2. Thesis Research Courses

For PhD students at pre-candidacy stage and candidacy stage, students **MUST** register for thesis research courses that have 6 units and 12 units respectively in each term (summer term excluded) and submit a research progress report in each term (summer term excluded). The minimum requirement is listed below.

Stage	Course Title	Units	Contact Hours	Minimum Grade
Pre-candidacy Stage	PHY8003 Thesis Research	6	84	B-
Candidacy Stage	PHY8003 Thesis Research	12	168	B-
Exceeding Normative Study Period	PHY8003 Thesis Research	12	168	B-

A student is required to meet with his/her supervisor regularly who provides necessary guidance and supervision on the student's thesis research and monitors his/her academic progress. The minimum grade requirement of this course is "B-".

1.3. Other Courses

Starting from AY2024-25, students are required to register for Research Seminars course in each term (summer term excluded) and complete **at least 5 seminar attendances before the end of each term** (summer term excluded) related to your own major and record your attendance via <https://docs.qq.com/form/page/DSUhkTUVZdGljSmlL?u=f1cfee0bf8f64d4dbdd1e95108014a6b#/fill>.

Stage	Course Title	Units	Contact Hours	Minimum Grade
Pre-candidacy Stage	PHY6431 Research Seminars	0	--	Pass
Candidacy Stage	PHY6431 Research Seminars	0	--	Pass
Exceeding Normative Study Period	PHY6431 Research Seminars	0	--	Pass

1.4. Civic Education

Please refer to the official notice from HSS.

2. Pre-candidacy stage to candidacy stage

There are two stages of PhD study: the pre-candidacy stage and the candidacy stage. No student will be admitted directly as a PhD student in candidacy stage; such a status can only be gained by a pre-candidacy PhD student upon satisfying all the Candidacy Requirements. Only a PhD candidate (i.e. PhD student in the candidacy stage) can submit a thesis and be examined.

No PhD student shall proceed to the candidacy stage until s/he has fulfilled all components of the requirements. The requirements are as follow:

- (a) Candidacy examination (including written and oral examinations) ; and

- (b) Credit requirements for 9 lecture courses at the pre-candidacy stage (Grade no lower than C, F&W grade will not be counted toward to the credit requirements.); and
- (c) Requirements for the civic education course (CEC) corresponding to the year of admission; and
- (d) Thesis research credit requirements; and
- (e) Attendance requirements for seminars.

The examination should be passed by the end of 24 months from the first entry for students with research master's degree or 36 months from the first entry for students without research master's degree.

The Candidacy Examination Policy of PHY refers to:

[PHY Implementation Guidelines for Candidacy Examination 1017.pdf](#)

4

3. Progress towards Graduation

Please refer to 5. Progress towards Graduation in Code of Practice.

4. Other Information

Code of Practice Research Postgraduate Studies refers to <https://gs.cuhk.edu.cn/RPG>

Appendix

Group A:

Course code	Course Title	Units	Contact Hours	Minimum Grade
PHY5110	Classical Mechanics and Special Relativity	3	42	C
PHY5130	Advanced Statistical Mechanics	3	42	C
PHY5410	Advanced Quantum Mechanics	3	42	C
PHY5420	Classical Electrodynamics	3	42	C

Group B:

Course code	Course Title	Units	Contact Hours	Minimum Grade
CIE6103	Physics of Photonic Devices	3	42	C
ENE6044	Electrodynamics II	3	42	C
MSE6031	Magnetism and Spintronic	3	42	C
MSE6101	Selected Topics in MSE	3	42	C
MSE6104	Computational Materials	3	42	C
MSE6105	Microstructural Evolution in Materials	3	42	C
MSE6106	Electronic, Optical, and Magnetic Properties of Materials	3	42	C
MSE6108	Nanomaterials	3	42	C
MSE6109	Energy Materials	3	42	C
MSE6110	Environmental Materials	3	42	C
MSE6205	Advanced Polymer Materials	3	42	C
MSE6401	Fluid Mechanics	3	42	C
MSE6402	Mathematical Modeling	3	42	C
PHY5430	Advanced Solid State Physics	3	42	C
PHY5510	Statistical Field Theory	3	42	C
PHY5520	Quantum Many Body Physics	3	42	C
PHY5530	Quantum Field Theory I	3	42	C
PHY5540	Advanced Physics Laboratory	3	42	C
PHY5541	Introduction to Topological Phases of Matter	3	42	C
PHY6100	Semiconductor Physics	3	42	C
PHY6530	Quantum Field Theory II	3	42	C
GGE5001F	Academic Writing and Presentation	2	28	Pass
SSE5001	Research Methodology and Ethics	1	14	Pass