

## Study Plan of MPhil - PhD Programme

Programme Title: MPhil-PhD in Chemistry

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 Chemistry (CHM), with research focus in synthetic chemistry, organometallic chemistry, catalytic chemistry, medicinal chemistry, chemical biology, advanced functional materials, environmental materials, nanomaterials, polymer chemistry, surface chemistry, energy materials, solar energy, fuel cells, and Li-ion batteries. An applicant with a research master's degree should apply for admission into the PhD Stream, while an applicant with a bachelor degree can apply for admission into either the MPhil or PhD Stream. Applicants should have education 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 <sup>1</sup> | 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      |

<sup>1</sup> 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<br>- CHM8006 Thesis Research- | 6 units × 4 terms = 24 units          |
|                                                           | Other Course<br>- CHM8010 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<br>- CHM8006 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.
- Up to 3 lecture courses (9 units) can be replaced by lecture 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 course and/or unit exemptions 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. The application should be approved by the Dean of the Graduate School after the endorsement of the Programme Director/Coordinator and the Graduate Panel Chair.

## 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 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------|---------------|---------------|
| CHM8006                                                                                                                                                                                                                                        | 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 |
|-------------|-------------------|-------|---------------|---------------|
| CHM8010     | 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 of Lecture courses and Thesis research courses (on a per term basis), during the pre-candidacy and post-candidacy stage. However, since the study period of the 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<br>- CHM8006 Thesis Research- | 6 units × 4 terms = 24 units          |
|                                                         | Other Course<br>- CHM8010 Research Seminars-         | 0 units × 4 terms = 0 units           |
|                                                         | Civic Education Courses                              | Refer to the official notice from HSS |
| Candidacy Stage (2 years)                               | Thesis Research Course<br>- CHM8006 Thesis Research- | 12 units × 4 terms = 48 units         |
|                                                         | Other Course<br>- CHM8010 Research Seminars-         | 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<br>- CHM8006 Thesis Research- | 12 units × 4 terms = 48 units         |
|                                                         | Other Course<br>- CHM8010 Research Seminars-         | 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 Courses<br>- CHM8006 Thesis Research- | 6 units × 6 terms = 36 units          |
|                                                         | Other Course<br>- CHM8010 Research Seminars-          | 0 units × 6 terms = 0 units           |
|                                                         | Civic Education Courses                               | Refer to the official notice from HSS |
| Candidacy Stage (2 years)                               | Thesis Research Courses<br>- CHM8006 Thesis Research- | 12 units × 4 terms = 48 units         |
|                                                         | Other Course<br>- CHM8010 Research Seminars-          | 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 Courses<br>- CHM8006 Thesis Research- | 12 units × 4 terms = 48 units         |
|                                                         | Other Course<br>- CHM8010 Research Seminars-          | 0 units × 4 terms = 0 units           |

## 1.1. Lecture Courses

### 1.1.1. Course Requirement

- A student will have to complete at least 27 units of lecture courses listed in Section 10 as part of the candidacy requirement.
- Up to 4 lecture courses (12 units) can be replaced by lecture 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 course and/or unit exemptions 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 9 units may be granted. The application should be approved by the Dean of the Graduate School after the endorsement of the Programme Director/Coordinator and the Graduate 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              | CHM8006 Thesis Research | 6     | 84            | B-            |
| Candidacy Stage                  | CHM8006 Thesis Research | 12    | 168           | B-            |
| Exceeding Normative Study Period | CHM8006 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=f1cfce0bf8f64d4dbdd1e95108014a6b#/fill>.

| Stage                            | Course Title              | Units | Contact Hours | Minimum Grade |
|----------------------------------|---------------------------|-------|---------------|---------------|
| Pre-candidacy Stage              | CHM8010 Research Seminars | 0     | --            | Pass          |
| Candidacy Stage                  | CHM8010 Research Seminars | 0     | --            | Pass          |
| Exceeding Normative Study Period | CHM8010 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 CHM refers to:

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

### **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

### Required Courses:

| Course code | Course Title                                       | Units | Contact Hours | Minimum Grade |
|-------------|----------------------------------------------------|-------|---------------|---------------|
| CHM6118     | Advanced Instrumental Analytical Laboratory        | 3     | 42            | C             |
| CHM6202     | Advanced Chemical Kinetics                         | 3     | 42            | C             |
| CHM6210     | Advanced Organometallic and Coordination Chemistry | 3     | 42            | C             |
| CHM6212     | Advanced Bioinorganic Chemistry                    | 3     | 42            | C             |
| CHM6322     | Advanced Physical Organic Chemistry                | 3     | 42            | C             |
| CHM6328     | Advanced Inorganic Chemistry Laboratory            | 3     | 42            | C             |
| CHM6330     | Advanced Transition Metal Chemistry and Catalysis  | 3     | 42            | C             |
| CHM6342     | Modern Organic Synthesis Methodology               | 3     | 42            | C             |
| CHM6348     | Advanced Organic Synthesis Laboratory              | 3     | 42            | C             |
| CHM6503     | Advanced Computational Chemistry                   | 3     | 42            | C             |
| CHM6543     | Advanced Functional Molecular Materials            | 3     | 42            | C             |
| CHM6547     | Heterogeneous Catalysis                            | 3     | 42            | C             |
| CHM6710     | Advanced Chemical Biology                          | 3     | 42            | C             |
| CHM6742     | Supramolecular Chemistry                           | 3     | 42            | C             |
| CHM6743     | Advanced Polymer Chemistry                         | 3     | 42            | C             |
| CHM6830     | Electrochemical Systems                            | 3     | 42            | C             |
| MSE6109     | Energy Materials                                   | 3     | 42            | C             |
| MSE6201     | Advanced Inorganic Chemistry                       | 3     | 42            | C             |
| MSE6202     | Advanced Organic Chemistry                         | 3     | 42            | C             |
| MSE6203     | Advanced Physical Chemistry                        | 3     | 42            | C             |
| MSE6204     | Advanced Analytical Chemistry                      | 3     | 42            | C             |
| MSE6211     | Thermodynamics and Kinetics                        | 3     | 42            | C             |
| MSE6301     | Molecular Quantum Mechanics                        | 3     | 42            | C             |
| GGE5001F    | Academic Writing and Presentation                  | 2     | 28            | Pass          |
| SSE5001     | Research Methodology and Ethics                    | 1     | 14            | Pass          |