City University of Hong Kong
Course Syllabus

offered by Department of Chemistry
with effect from Semester A 2024/25

Part I Course Overview

Course Title:	Advanced Seminar Series
Course Code:	CHEM6126
Course Duration:	2 semesters
Credit Units:	3 credits
Level:	P6
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course Code and Title)*	Nil
Precursors: *(Course Code and Title)*	Nil
Equivalent Courses: *(Course Code and Title)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II Course Details

1. Abstract

This course is a core course for the self-financed taught MSc in Chemistry programme of the Department of Chemistry. This course aims for postgraduate students to:

- Discover and learn about frontier scientific research methodologies and achievements in the various fields and disciplines of Chemistry and related Molecular Sciences from leading experts in their fields
- Develop skills in communication and presentation of scientific results in a professional manner
- Develop ability to critically appraise research results
- Broaden their knowledge base in scientific research topics other than their own fields, and to develop critical thinking and analytical skills in research

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	Articulate and critically evaluate advanced research methodologies in the various fields and disciplines of Chemistry and related Molecular Sciences based on available literatures and experience acquired by leading experts in their fields		✓	✓	
2.	Demonstrate detailed knowledge of the relevant background literature with good understanding of the scientific research methods involved; analysis and interpret experimental data; draw scientifically sound conclusions from experimental results			✓	
3.	Produce new insights to the various fields and disciplines of Chemistry and related Molecular Sciences; apply knowledge acquired from available literature and critically evaluated experimental results to solve real problems in the selected fields and disciplines of Chemistry and related Molecular Sciences			✓	✓
4.	Demonstrate good writing skill and ability to communicate scientific information in a professional manner			✓	✓
		100%			

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: *Accomplishments*
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Learning and Teaching Activities (LTAs)

(LTAs designed to facilitate students' achievement of the CILOs.)

LTA	Brief Description	CILO No.			
		1	2	3	4
Research seminars	Students will participate in at least six research seminars/webinars (preferably on a specific field in Chemistry or related Molecular Sciences) held by universities in Hong Kong	✓			
Seminar reports	Students will prepare seminar reports on the selected seminars to provide critical analyses and reviews on the research topics and the methodologies adopted		✓		
Research proposal	Students will prepare a new research proposal, on a topic that is different from one's MSc Dissertation, based on knowledge acquired from available literature and the research seminars attended	✓	✓	✓	✓

Note: The schedules of research seminars are not fixed and will be announced through email. The seminars may be arranged on-campus or online. All students, including those taking the part-time mode of study, must attend at least six research seminars/webinars in order to pass this course.

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.				Weighting	Remarks
	1	2	3	4		
Continuous Assessment: 100%						
Seminar attendance & seminar reports	✓	✓			60%	
Research proposal	✓	✓	✓	✓	40%	
					100%	

Starting from Semester A, 2015-16, students must satisfy the following minimum passing requirement for courses offered by CHEM:

"A minimum of 40% in both coursework and examination components."

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Applicable to students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Seminar attendance & seminar reports	Demonstrate of understanding and the ability to critically evaluate relevant background literature, scientific research methods, and experimental data analysis and interpret, of selected field/discipline of Chemistry or related Molecular Sciences.	(1) Attendance of at least six research seminars on selected fields/disciplines of Chemistry or related Molecular Sciences held by universities in Hong Kong, AND (2) Able to demonstrate excellent understanding and critical evaluation of the relevant background literature, scientific research methods, and experimental data analysis and interpret of the selected field/discipline.	(1) Attendance of at least six research seminars on selected fields/disciplines of Chemistry or related Molecular Sciences held by universities in Hong Kong, AND (2) Able to describe and evaluate relevant background literature, scientific research methods, and experimental data analysis and interpret of the selected field/discipline.	(1) Attendance of at least six research seminars on selected fields/disciplines of Chemistry or related Molecular Sciences held by universities in Hong Kong, AND (2) Able to describe and evaluate some key background literature, scientific research methods, and experimental data analysis and interpret of the selected field/discipline.	(1) Attendance of at least six research seminars on selected fields/disciplines of Chemistry or related Molecular Sciences held by universities in Hong Kong, AND (2) Able to briefly describe isolated background literature, scientific research methods, and experimental data analysis and interpret of the selected field/discipline.	(1) Fail to attend at least six seminars, OR (2) Fail to accurately describe relevant background literature, scientific research methods, and experimental data analysis and interpret of the selected field/discipline.
2. Research proposal	Demonstration of the ability to produce new insights to a selected field/discipline of Chemistry and related Molecular Sciences.	Able to demonstrate excellent creativity and critical thinking to the selected field/discipline of Chemistry or related Molecular Sciences in the format of a formal research proposal.	Able to provide insights, and to demonstrate certain degree of creativity, to the selected field/discipline of Chemistry or related Molecular Sciences in the format of a formal research proposal.	Able to assimilate background knowledge of the selected field/discipline of Chemistry or related Molecular Sciences and come up with a formal and technically sound research proposal.	Able to produce a formal research proposal based on certain key knowledge of the selected field/discipline of Chemistry or related Molecular Sciences.	Fail to produce any technically sound research proposal of the selected field/discipline of Chemistry or related Molecular Sciences.

Applicable to students admitted from Semester A 2022/23 to Summer Term 2024

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Seminar attendance & seminar reports	Demonstrate of understanding and the ability to critically evaluate relevant background literature, scientific research methods, and experimental data analysis and interpret, of selected field/discipline of Chemistry or related Molecular Sciences.	(1) Attendance of at least six research seminars on selected fields/disciplines of Chemistry or related Molecular Sciences held by universities in Hong Kong, AND (2) Able to demonstrate excellent understanding and critical evaluation of the relevant background literature, scientific research methods, and experimental data analysis and interpret of the selected field/discipline.	(1) Attendance of at least six research seminars on selected fields/disciplines of Chemistry or related Molecular Sciences held by universities in Hong Kong, AND (2) Able to describe and evaluate relevant background literature, scientific research methods, and experimental data analysis and interpret of the selected field/discipline.	(1) Attendance of at least six research seminars on selected fields/disciplines of Chemistry or related Molecular Sciences held by universities in Hong Kong, AND (2) Able to briefly describe isolated background literature, scientific research methods, and experimental data analysis and interpret of the selected field/discipline.	(1) Fail to attend at least six seminars, OR (2) Fail to accurately describe relevant background literature, scientific research methods, and experimental data analysis and interpret of the selected field/discipline.
2. Research proposal	Demonstration of the ability to produce new insights to a selected field/discipline of Chemistry and related Molecular Sciences.	Able to demonstrate excellent creativity and critical thinking to the selected field/discipline of Chemistry or related Molecular Sciences in the format of a formal research proposal.	Able to provide insights, and to demonstrate certain degree of creativity, to the selected field/discipline of Chemistry or related Molecular Sciences in the format of a formal research proposal.	Able to produce a formal research proposal based on certain key knowledge of the selected field/discipline of Chemistry or related Molecular Sciences.	Fail to produce any technically sound research proposal of the selected field/discipline of Chemistry or related Molecular Sciences.

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

There will be no fixed syllabus for this course. Seminars and research proposals will be based on the relevant fields / disciplines selected by the MSc student.

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

N.A.

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1.	The grant writer's handbook [electronic resource]: How to write a research proposal and succeed, Gerard M. Crawley, Eoin O'Sullivan, Imperial College Press, London, 2016.
2.	Planning your research and how to write it [electronic resource], Aziz Nather Eds., World Scientific Publishing Co. Pte Ltd., Singapore, 2016.