

## Course Syllabus

**offered by Department of Chemistry  
with effect from Semester B 2017/18**

This form is for the completion by the *Course Leader*. The information provided on this form is the official record of the course. It will be used for the City University's database, various City University publications (including websites) and documentation for students and others as required.

Please refer to the Explanatory Notes on the various items of information required.

**Prepared / Last Updated by:**

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**City University of Hong Kong  
Course Syllabus**

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**Part I Course Overview**

<b>Course Title:</b>	Advanced Seminar Series
<b>Course Code:</b>	BCH6122
<b>Course Duration:</b>	2 semesters
<b>Credit Units:</b>	4 credits
<b>Level:</b>	P6
<b>Proposed Area:</b> <i>(for GE courses only)</i>	<input type="checkbox"/> Arts and Humanities <input type="checkbox"/> Study of Societies, Social and Business Organisations <input type="checkbox"/> Science and Technology
<b>Medium of Instruction:</b>	English
<b>Medium of Assessment:</b>	English
<b>Prerequisites:</b> <i>(Course Code and Title)</i>	Nil
<b>Precursors:</b> <i>(Course Code and Title)</i>	Nil
<b>Equivalent Courses:</b> <i>(Course Code and Title)</i>	Nil
<b>Exclusive Courses:</b> <i>(Course Code and Title)</i>	Nil

## Part II Course Details

### 1. Abstract

(A 150-word description about the course)

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 <sup>#</sup>	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 presentation skills and ability to communicate scientific information in a professional manner			✓	✓
		100%			

\* If weighting is assigned to CILOs, they should add up to 100%.

<sup>#</sup> Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

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 self-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. Teaching and Learning Activities (TLAs)**  
(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.			
		1	2	3	4
Research seminars	Participate in at least eight research seminars (preferably on a specific field in Chemistry or related Molecular Sciences) held by universities in Hong Kong	✓			
Seminar reports	Preparation of seminar reports on two of selected seminars to provide critical analyses and reviews on the research topics and the methodologies adopted		✓		
Research proposal	Preparation of 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	✓	✓	✓	✓
Proposal oral defence	Delivery of formal oral presentations of the research proposal students' and address queries from a panel of experts in the relevant field / discipline		✓		✓

**Note:** The schedules of research seminars are not fixed and will be announced through email. Most of the research seminars start at 4:00 pm or 5:00 pm. All students, including those taking the part-time mode of study, must attend at least eight research seminars in order to pass this course. Students can attend Webinars by [American Chemical Society](#) in the replacement of research seminars held by universities in Hong Kong. However, only up to three required research seminars can be replaced by Webinars, and prior approval from the supervisor is required.

**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: <u>100%</u>						
Seminar attendance & seminar reports	✓	✓			45%	
Research proposal	✓	✓	✓	✓	40%	
Proposal oral defence		✓		✓	15%	
* The weightings should add up to 100%.					100%	

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

**“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.)

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 eight 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 eight 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 eight 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 eight 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 eight 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
3. Proposal oral defence	Demonstrate ability to present and communicate scientific information in a professional manner	Able to deliver fluent, well organized and well prepared presentations of a research proposal in selected field/discipline of Chemistry or related Molecular Sciences in a professional manner.	Able to deliver fluent and comprehensible presentations, with evidence of proper preparation, of a research proposal in selected field/discipline of Chemistry or related Molecular Sciences in a professional manner.	Able to deliver comprehensible presentations, with evidence of proper preparation, of a research proposal in selected field/discipline of Chemistry or related Molecular Sciences in a professional manner.	Able to deliver comprehensible presentations of a research proposal in selected field/discipline of Chemistry or related Molecular Sciences in a professional manner.	Fail to present the research proposal in a comprehensible and professional manner.

### **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.

Please specify the Gateway Education Programme Intended Learning Outcomes (PILOs) that the course is aligned to and relate them to the CILOs stated in Part II, Section 2 of this form:

<b>GE PILO</b>	<b>Please indicate which CILO(s) is/are related to this PILO, if any (can be more than one CILOs in each PILO)</b>
PILO 1: Demonstrate the capacity for self-directed learning	
PILO 2: Explain the basic methodologies and techniques of inquiry of the arts and humanities, social sciences, business, and science and technology	
PILO 3: Demonstrate critical thinking skills	
PILO 4: Interpret information and numerical data	
PILO 5: Produce structured, well-organised and fluent text	
PILO 6: Demonstrate effective oral communication skills	
PILO 7: Demonstrate an ability to work effectively in a team	
PILO 8: Recognise important characteristics of their own culture(s) and at least one other culture, and their impact on global issues	
PILO 9: Value ethical and socially responsible actions	
PILO 10: Demonstrate the attitude and/or ability to accomplish discovery and/or innovation	

*GE course leaders should cover the mandatory PILOs for the GE area (Area 1: Arts and Humanities; Area 2: Study of Societies, Social and Business Organisations; Area 3: Science and Technology) for which they have classified their course; for quality assurance purposes, they are advised to carefully consider if it is beneficial to claim any coverage of additional PILOs. General advice would be to restrict PILOs to only the essential ones. (Please refer to the curricular mapping of GE programme: [http://www.cityu.edu.hk/edge/ge/faculty/curricular\\_mapping.htm](http://www.cityu.edu.hk/edge/ge/faculty/curricular_mapping.htm).)*

- A. Please select an assessment task for collecting evidence of student achievement for quality assurance purposes. Please retain at least one sample of student achievement across a period of three years.

<b>Selected Assessment Task</b>