SYL-TPG (Interim)

香港城市大學
City University of Hong Kong

Course Syllabus

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

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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Part I Course Overview

Course Title:	Advanced Directed Studies
Course Code:	CHEM6129
Course Duration:	2 semesters
Credit Units:	6 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

(A 150-word description about the course)

This course aims to allow students to pursue a defined program of study directed by an academic staff member in CHEM. The course encourages students to broaden their vision in scientific research via discovery-based learning and research, to develop their initiative, interests, and individual thinking, and to have a deeper understanding of a specific area in Chemistry/Biology/Environmental/Material Sciences. On completing this course, students will be able to:

-demonstrate their initiative and understanding of the chosen subject area and identify the existing research problems and challenges;

-be familiar with various research methods and be able to identify a promising method for research problems;

-manage and present their report in a precise and coherent manner.

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.	Develop, state, and justify the recent progress of the chosen subject area related to chemical science and technology.		√	√	√
2.	Research, assemble, and critically evaluate literature relevant to the problem being analyzed.			√	
3.	Identify the challenges and research problems in the chosen subject area and propose the potential solutions.		√	√	
4.	Write a report presenting the problem being analysed. The report should be organized in the fashion of a scientific paper, i.e. it should include a research background, methods/results, and conclusions/outlook.			√	√
5.	Make a formal oral presentation of the research project, effectively summarising the project's background, discussion/results, and conclusions.			√	√
** If weighting is assigned to CILOs, they should add up to 100%.*		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 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.					Hours/week (if applicable)
		1	2	3	4	5	
Discussions with supervisor	Discussions with the student's supervisor and student's reading of the current literature will lead to the development, and refinement, of a testable chemical problem.	√					
Literature search	Library and web-based searching of the literature, reading, and interpretation of relevant scientific literature, and assembly of a literature review relating to the testable chemical problem.		√	√			
Literature review	assembly of a literature review relating to the testable chemical problem.		√	√			
Report writing	Writing, under guidance, a formal scientific report summarising the current progress, achievements, and outlook related to the subject matter.			√	√		
Oral presentations	Delivery of two formal oral presentations, one as the proposal of the project (week 4); and the other one as a summarization at the end of the project. The duration of each presentation is 20 min (5-min question and answer session included).					√	

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	5		
Continuous Assessment: 100%							
Oral presentations	√	√	√		√	30%	Total 2 presentations, each of them accounts for 15% of the final marks.
Reports	√	√	√	√		70%	Total 2 reports, a progress report submitted at the end of the first semester and assessed by the supervisor only. A second full report should be submitted by the end of the second semester. The progress report accounts for 20% of the final marks, and the full report for 50%.
Examination: 0%							
** The weightings should add up to 100%.*						100%	

Starting from Semester A, 2015-16, students must satisfy the following minimum passing requirement for CHEM 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)	Marginal (B-, C+, C)	Failure (F)
1. Oral presentations	Ability to demonstrate or explain the principles, methodologies, problems, and limitations of the selected research topic.	High	Significant	Moderate	Not even reaching marginal levels
2. Report	-Demonstrate critical thinking ability and problem-solving ability in the selected research topic. -Novelty of the research project. -Ability to provide detailed, critical analysis of literature results, clear explanations, and fair justifications. -Demonstrate ability in the integration of various sources of information to explain the impact of the findings via clear written communication.	High	Significant	Moderate	Not even reaching marginal levels

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.)

The course is flexible and has no specific syllabus.

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.)

Nil

2.2 Additional Readings

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

Nil