

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:

Name: Prof. WONG Chun-Yuen Alex Academic Unit: Department of Chemistry

Phone/email: 3442 6831/
acywong@cityu.edu.hk Date: 29 December 2023

**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: Cosmetic Product Development and Formulation

Course Code: CHEM6130

Course Duration: 1 semester (2 semesters for students taking the part-time mode of study)

Credit Units: 3

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 is a project-based course designed to train students who are interested in pursuing a career as cosmetic formulation chemists. The main objective is for students to develop their own new, improved, or modified cosmetic formulations, working individually under the guidance of the course coordinator or experts assigned by the Hong Kong Society of Cosmetics (HKSCC). By the end of this course, students will have achieved the following learning outcomes:

- (1) Gain a comprehensive understanding of cosmetic ingredients and regulations applicable worldwide;
- (2) Demonstrate proficiency in laboratory-scale and pilot-run cosmetic production techniques;
- (3) Evaluate the performance and effectiveness of various cosmetic formulations;
- (4) Effectively communicate the rationale behind their cosmetic design choices 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.	Research, develop, and critically evaluate a new, improved, or modified cosmetic formulation.		✓	✓	✓
2.	Analyze and interpret data accurately.			✓	✓
3.	Make a formal oral presentation of the designed cosmetic formulation, effectively summarize the project's background, problem analysis, methods used, results achieved, and conclusions.			✓	✓
4.	Write a comprehensive report to present and articulate the problem being addressed and solved.			✓	✓
		100%			

* If weighting is assigned to CILOs, they should add up to 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	
Discussion with representative assigned by the Hong Kong Society of Cosmetics	Discussions with experts in the field of cosmetics leading to develop and refine a testable cosmetic formulation project.	✓				
Literature search	Conduct library and web-based searches to gather information on raw materials and develop a rationale for a specific cosmetic formulation.	✓	✓			
Experiments	Conduct appropriate experiments at CityU and/or with industrial partners of CityU/HKSCC, and diligently maintain a logbook documenting relevant data throughout the experimental process.		✓			At least 8 hours per week for 10 weeks (at least 4 hours per week for 20 weeks for students taking the part-time mode of study).
Data analysis	Perform data analysis using appropriate evaluation and characterization techniques.		✓			
Oral presentation	Deliver a 20-minute oral presentation at the conclusion of the project, including a 10-minute question and answer session.			✓		
Written reports	Write concise and comprehensive reports to effectively present and articulate the problem that is being addressed and solved.				✓	

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>						
Oral presentation	✓	✓	✓		30%	Deliver 20-minute oral presentation at the conclusion of the project (Week 13 for full time students), including a 10-minute question and answer session.
Written reports	✓	✓		✓	70%	-Submit weekly written reports from Week 3 to Week 10, consisting of 8 reports (8 bi-weekly reports for students taking the part-time mode of study). Each report should span less than 5 A4 pages and effectively present and articulate the addressed problem and its solution. These reports account for 40% of the final marks -Prepare a concise and comprehensive final report, spanning less than 10 A4 pages, to provide a thorough overview of the project, its findings, and the implemented solution. The final report accounts for 30% of the final marks.
Examination: <u>0%</u>						

* 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.)

Applicable to students admitted in Semester A 2024/25 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Oral presentation	Ability to demonstrate or explain the rationales, methodologies, problems, and limitations of the designed cosmetic formulation with clarity and proficiency.	High	Significant	Basic	Not even reaching marginal level
2. Written report	<ul style="list-style-type: none">-Demonstrate critical thinking and problem-solving abilities in the design of cosmetic formulations.-Highlight the novelty and uniqueness of the cosmetic formulation.-Provide detailed, critical analysis of the data, accompanied by clear explanations and fair justifications.-Demonstrate the ability to integrate information from various sources to effectively communicate the impact of the findings through clear written communication.	High	Significant	Basic	Not even reaching marginal level

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.)

Nil

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