CHEM8007M: WINDOW ON SCIENCE M

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Window on Science M

Subject Code
CHEM - Chemistry
Course Number
8007M

Academic Unit
Chemistry (CHEM)

College/School
College of Science (SI)

Course Duration
Two Semesters

Credit Units
0-6

Level
R8 - Research Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
BCH8007A Window on Science A

Exclusive Courses
Nil

Part II Course Details

Abstract
This course is a core postgraduate course only for Ph.D. students under collaboration schemes with Mainland China in the Department of Chemistry.

In this course, postgraduate Ph.D. students will:

- Discover and learn about frontier scientific research methodologies and achievements in Chemistry, Biology, Environmental Science and various other disciplines in science 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 disciplines, and to develop critical thinking and analytical skills in research.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Articulate and critically evaluate advanced research methodologies in Biology, Chemistry, Environmental Science and various other disciplines of science based on available literatures and experience acquired by leading experts in their fields.	40	x	x	
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.	20	x	x	
3	Demonstrate good presentation skills and ability to communicate scientific information in a professional manner.	10		x	x
4	Critically evaluate experimental data and results.	30		x	x

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.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Departmental seminars and seminar reports	(1) Participate in departmental seminars given by invited speakers or other seminars related to students' own research field in symposiums and conferences (2) Preparation of seminar reports on selected seminars to provide critical analyses and reviews on the research topics and the methodologies adopted	1	(1) Attendance of at least twelve seminars within a period of two semesters (on average six seminars per semester) (2) Preparation of four seminar reports within a period of two semesters
2	Oral presentations	Delivery of formal oral presentations of students' own research work (30 min.) followed by questions (10 min.) from the audience	2	(1) Attendance of at least twenty-four oral presentations given by fellow postgraduate students of the relevant discipline within a period of two semesters (on average twelve oral presentations per semester) (2) Delivery of two oral presentations (not including one as the oral examination of qualifying report) within a period of two semesters
3	As in CILO 2	As in CILO 2	3	As in CILO 2
4	Critiques	Preparation of critiques to critically analyse and review the content, research methodology, interpretation of experimental data and presentation skill of selected presentations of other fellow postgraduate students	4	Preparation of six critiques within a period of two semesters

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Attendance of seminars and assessment of seminar reports by the corresponding invited speakers or relevant assessors	1	40	-	Yes
2	Assessment of student’ s oral presentation by his/her research supervisor and a second assessor	2	20	Note: Assessment from the research supervisor and the second assessor each constitutes 50% of the overall presentation marks (CILO 2 & 3)	Yes
3	As in CILO 2	3	10	-	Yes
4	Assessment of the critiques by the supervisors of the postgraduate students to whom the critiques were concerned	4	30	-	Yes

Continuous Assessment (%)

100

Minimum Continuous Assessment Passing Requirement (%)

40

Assessment Rubrics (AR)

Assessment Task

Attendance of seminars and assessment of seminar reports by the corresponding invited speakers or relevant assessors (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

General criterion are students’ understanding of the topic, research methodologies involved and material presented and their critical analysis of the science in the presentation.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Assessment of student’ s oral presentation by his/her research supervisor and a second assessor (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

General criterion are the content, method and organization of the presentation, the students’ communication skill and their handling of the questions.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Assessment of the critiques by the supervisors of the postgraduate students to whom the critiques were concerned (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

General criterion are students’ understanding of the topic and materials presented, their critical analysis of the science in the presentation and their critical evaluation of the presentation skills.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Attendance of seminars and assessment of seminar reports by the corresponding invited speakers or relevant assessors (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

General criterion are students' understanding of the topic, research methodologies involved and material presented and their critical analysis of the science in the presentation.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

Assessment of student's oral presentation by his/her research supervisor and a second assessor (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

General criterion are the content, method and organization of the presentation, the students' communication skill and their handling of the questions.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Basic

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(F) Not even reaching marginal levels

Assessment Task

Assessment of the critiques by the supervisors of the postgraduate students to whom the critiques were concerned (for students admitted from Semester A 2022/23 to Summer Term 2024)

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General criterion are students' understanding of the topic and materials presented, their critical analysis of the science in the presentation and their critical evaluation of the presentation skills.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Basic

Failure

(F) Not even reaching marginal levels

Part III Other Information

Keyword Syllabus

There will be no fixed syllabus for this course. Seminars and presentation topics will be based on the research disciplines of the postgraduate Ph.D. student.

Reading List