

# CHEM4037: SEMINAR SERIES

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## Effective Term

Semester A 2022/23

## Part I Course Overview

### Course Title

Seminar Series

### Subject Code

CHEM - Chemistry

### Course Number

4037

### Academic Unit

Chemistry (CHEM)

### College/School

College of Science (SI)

### Course Duration

Two Semesters

### Credit Units

0-3

### Level

B1, B2, B3, B4 - Bachelor's Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

Nil

### Precursors

Nil

### Equivalent Courses

BCH4037 Seminar Series

### Exclusive Courses

Nil

## Part II Course Details

### Abstract

In this course, students will:

- develop the ability to synthesize relevant background literature and demonstrate detailed knowledge of the context of the research topic
- learn to manage a substantial piece of individual literature-based investigation
- develop skills in problem-solving and in scientific communication in the form of written and verbal presentation of information

### Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if DEC-A1 DEC-A2 DEC-A3 app.)			
1	Demonstrate detailed knowledge of the relevant background literature, recognise the limits of the hypotheses involved, good knowledge of the scientific methods and instrumentation(s) involved, critical evaluation and synthesis of published data/information.		x		
2	Present an effectively well-organized, clear and accurate scientific report in written form.			x	
3	Provide a formal oral presentation of a literature-based project, based on the student's critical evaluation of the presented material.			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.

### Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
Literature-search activities and regular meetings with supervisor	Students to keep a log of their literature-search activities, and regular meetings with supervisor to discuss progress of research.	1	
Scientific report	Preparation of a detailed scientific report.	2	
Oral presentation	Delivery of a formal oral presentation of their research (10 min), followed by questions (5 min) from the audience.	3	

**Assessment Tasks / Activities (ATs)**

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Literature-search activities	1	25	
2	Written scientific report	2	65	
3	Oral presentation	3	10	

**Continuous Assessment (%)**

100

**Examination (%)**

0

**Additional Information for ATs**

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.”

**Assessment Rubrics (AR)****Assessment Task**

Literature-search activities

**Criterion**

Ability to use literature database to find relevant literatures and to organize and present literatures in a concise and clear way.

**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**

Written scientific report

**Criterion**

Ability to demonstrate thorough understanding of the project topic and excellent execution of a wide range of conventions relevant to science, to logically illustrate mastery of the subject, to use existing references to support the ideas, to present and analyse data in excellent ways, to discuss the assumptions, limitations, and weaknesses, to present logical and excellent explanations for the findings and accurately address the hypothesis, and to use scientific languages that skillfully communicate meaning to readers with clarity and fluency.

**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

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**Assessment Task**

Oral presentation

**Criterion**

Ability to clearly organize a presentation with cohesive content, to deliver a compelling presentation with confidence using different techniques (posture, gesture, eye contact, and vocal expressiveness), to understand the questions completely, and to answer the questions as precisely as they can be.

**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

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## Part III Other Information

**Keyword Syllabus**

- Management of a substantial piece of individual research and developmental research project
- Critical thinking and problem-solving skills
- Effective communication in the form of written and verbal presentation of scientific information

**Reading List**

**Compulsory Readings**

Title	
1	Nil

**Additional Readings**

	Title
1	Online Resources: To be provided, as required.