# CHEM4037: SEMINAR SERIES

**Effective Term**
Semester A 2024/25

## 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 app.) | DEC-A1 | DEC-A2 | DEC-A3 |
|---|---|---|---|---|---|
| 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.

**Learning and Teaching Activities (LTAs)**

| | LTAs | Brief Description | CILO No. | Hours/week (if applicable) |
|---|---|---|---|---|
| 1 | Literature-search activities and regular meetings with supervisor | Students will keep a log of their literature-search activities, and regularly meet with supervisor to discuss progress of research. | 1 | |
| 2 | Scientific report | Students will prepare a detailed scientific report. | 2 | |
| 3 | Oral presentation | Students will deliver 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-)**

Able to demonstrate excellent knowledge in the prior literature related to the selected research topic

**Good (B+, B, B-)**

Able to explain and describe the prior literature related to the selected research topic

**Fair (C+, C, C-)**

Able to understand the key research findings related to the selected research topic

**Marginal (D)**

Able to understand some of the research findings related to the selected research topic

**Failure (F)**

Fail to understand some of the research principles related to the selected research topic

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**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-)**

Able to demonstrate excellent knowledge in the research techniques and organize this knowledge in a clear, logical and accurate manner

**Good (B+, B, B-)**
Able to understand the research techniques and organize this knowledge in a clear, logical and accurate manner

**Fair (C+, C, C-)**
Able to understand the key research techniques and organize this knowledge in a written manner

**Marginal (D)**
Able to understand some of the research techniques and organize this knowledge in a written manner

**Failure (F)**
Fail to understand some of the research techniques and organize this knowledge in a written manner

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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-)**
Able to deliver fluent, well organized and well prepared presentations to demonstrate excellent understanding of the selected research topic

**Good (B+, B, B-)**
Able to deliver fluent presentations, with evidence of proper preparation, to describe and explain the selected research topic

**Fair (C+, C, C-)**
Able to deliver presentations, with evidence of proper preparation, to describe and explain some key principles and findings of the selected research topic.

**Marginal (D)**
Able to deliver comprehensible presentations to briefly describe isolated principles and findings of the selected research topic.

**Failure (F)**
Fail to present relevant principles of the selected research topic in coherent and comprehensible manners.

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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. |