CHEM3042: DIRECTED STUDIES IN BIOLOGY/ CHEMISTRY/ENVIRONMENTAL SCIENCES

Effective Term
Semester A 2024/25

Part I Course Overview

Course Title
Directed Studies in Biology/Chemistry/Environmental Sciences

Subject Code
CHEM - Chemistry
Course Number
3042

Academic Unit
Chemistry (CHEM)

College/School
College of Science (SI)

Course Duration
Non-standard Duration

Other Course Duration
Flexible, varying from a few weeks to one semester

Credit Units
1-4

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

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
BCH3042 Directed Studies in Biology/Chemistry/Environmental Sciences

Exclusive Courses
See CILOs Below

Part II Course Details

Abstract

This course allows students to conduct work under the direction of a faculty member in CHEM or to attend courses/ workshops/study tours in relevant areas recommended by the Department. The course encourages students to develop their initiative, interests, individual thinking, from a discovery approach and have a deeper understanding of the science underlining a specific area in Biology, Chemistry or Environmental Sciences.

A student can approach an academic staff member to carry out directed studies. Note that the course **can only be taken once** by students throughout their programme of study.

Students are advised to carefully read the restrictions on this course, as detailed under Course Intended Learning Outcomes (see CILOs below).

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Conduct specified work under the direction of a faculty member in CHEM or attend courses/ workshops/study tours in relevant areas recommended by the Department. An emphasis is placed on the innovative and discovery-based elements of the study.	100		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	A wide range of learning activities	The course is designed to be flexible and self-directed, with no specific syllabus. Students are encouraged to actively seek out and define their own topics, under the guidance of an academic staff member. They can attend a particular workshop or course, participate in a study tour, conduct fieldwork, a library search, or a small research project, or assist on a bigger project in Biology, Chemistry, or Environmental Sciences. Innovative and discovery-based elements are essential in teaching and learning activities.	1	Flexible, depending upon total credit units assigned.

Additional Information for LTAs

NOTE: If the nature of the Directed Studies is research or seminar-oriented, the research work MUST NOT overlap with the work undertaken for CHEM4036 Project or CHEM4037 Seminar Series, and should not be supervised by the same academic staff.

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Varies dependent upon the nature of the studies. Assessment could be a combination of continuous assessment and examination, or could be focused on continuous evaluation of student' s learning process and outcomes. Innovative and discovery-based elements will be highlighted in the assessment tasks/ activities.	1	100	See notes in LTAs above. For restrictions, see notes in CILOs above

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

Varies dependent upon the nature of the studies. Assessment could be a combination of continuous assessment and examination, or could be focused on continuous evaluation of student's learning process and outcomes. Innovative and discovery-based elements will be highlighted in the assessment tasks/activities.

Criterion

Varies dependent upon the nature of the studies. General criterion are students' ABILITY to integrate concepts of chemistry/biology/environmental science, and to apply them to solve problems and/or demonstrate scientific advancement in the subject of the studies

Excellent (A+, A, A-)

Able to demonstrate a comprehensive understanding of the chosen topic and present the project outcome convincingly.

Good (B+, B, B-)

Have a good understanding of the chosen topic, with the project outcome being delivered in a well-organized manner.

Fair (C+, C, C-)

Have a general understanding of the chosen topic.

Marginal (D)

Have a limited understanding of the chosen topic.

Failure (F)

Fail to show an understanding of the chosen topic.

Part III Other Information

Keyword Syllabus

The course is flexible, and has no specific syllabus. An academic staff member can direct student(s) to attend a particular workshop or course, participate in a study tour, conduct fieldwork, library search or a small research project, or assist on a bigger project, etc. in Biology, Chemistry or Environmental Sciences. A student can also approach an academic staff member to carry out directed studies.

Innovative and discovery-based elements are essential in the study.

The course is to be taken **only once** by students throughout their programme of study.

The number of credits assigned to the directed studies is assigned according to time spent for a particular study, the level of difficulty, and the depth of the studies. The maximum credit units gained should be between 1 and 4.

The nature of the study, number of credit units gained, and evaluation / assessment pattern will be considered by a Directed Studies Committee which will make a recommendation to the Head of the Department for endorsement before initiating the Directed Studies.

Reading List

Compulsory Readings

	Title
1	Nil

Additional Readings

	Title
1	As specified by an individual staff member.
2	Online Resources: As specified by an individual staff member