#### CHEM 49 Course Outline as of Fall 2016

## **CATALOG INFORMATION**

Dept and Nbr: CHEM 49 Title: INDEPENDENT STUDY Full Title: Independent Study in Chemistry Last Reviewed: 2/28/2022

Units		<b>Course Hours per Week</b>	Ν	br of Weeks	<b>Course Hours Total</b>	
Maximum	3.00	Lecture Scheduled	0	17.5	Lecture Scheduled	0
Minimum	1.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	1.00		Contact DHR	17.50
		Contact Total	1.00		Contact Total	17.50
		Non-contact DHR	8.00		Non-contact DHR	140.00

Total Out of Class Hours: 0.00

Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade Only
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

#### **Catalog Description:**

Literature, laboratory, or field research in chemistry, by arrangement, to provide for independent study. UC determines credit AFTER transfer; not counted for admission. (See a counselor for details.)

**Prerequisites/Corequisites:** Course Completion of CHEM 1B OR CHEM 4B

#### **Recommended Preparation:**

#### **Limits on Enrollment:**

Approval of the project proposal by sponsoring faculty, Department Chair and Supervising Administrator.

Preliminary application (written description of project objectives and methods, selection of faculty supervisor, list of required equipment and supplies) must be submitted to department chairperson one semester in advance.

#### **Schedule of Classes Information:**

Description: Literature, laboratory, or field research in chemistry, by arrangement, to provide for

independent study. UC determines credit AFTER transfer; not counted for admission. (See a counselor for details.) (Grade Only) Prerequisites/Corequisites: Course Completion of CHEM 1B OR CHEM 4B Recommended: Limits on Enrollment: Approval of the project proposal by sponsoring faculty, Department Chair

and Supervising Administrator.

Preliminary application (written description of project objectives and methods, selection of faculty supervisor, list of required equipment and supplies) must be submitted to department chairperson one semester in advance. Transfer Credit: CSU;UC. Repeatability: Two Repeats if Grade was D, F, NC, or NP

# **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

AS Degree: CSU GE:	Area Transfer Area	ı		Effective: Effective:	Inactive: Inactive:
<b>IGETC:</b>	Transfer Area	l		Effective:	Inactive:
CSU Transfer	:Transferable	Effective:	Fall 1981	Inactive:	
UC Transfer:	Transferable	Effective:	Fall 1981	Inactive:	

## CID:

## **Certificate/Major Applicable:**

Not Certificate/Major Applicable

# **COURSE CONTENT**

## **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. After successful completion of this course, students will be able to:

Expand their knowledge base in a chosen area of chemistry through independent research. **Objectives:** 

After successful completion of this course, students will be able to:

- 1. Design a chemistry-related independent study project.
- 2. Perform scientific literature, laboratory, and/or field research relevant to the project.
- 3. Present the results of the study in written, visual, and/or oral format.

## **Topics and Scope:**

Content will vary with the student, but will expand upon the department's regular offerings and capitalize on the student's special interests or abilities.

## Assignment:

Will be arranged between the student and the instructor

#### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Literature reports, term papers

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Interpretation of research

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Lab and field research

**Exams:** All forms of formal testing, other than skill performance exams.

None

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Oral presentation of results, experiment and/or field research design.

## **Representative Textbooks and Materials:**

Text will vary with content.

Problem solving 20 - 80%
Skill Demonstrations 0 - 30%

Writing

20 - 80%

Exams 0 - 0%