

CHEM 164: ADVANCED BIOCHEMISTRY LABORATORY

In Workflow

1. CHEM Committee Chair (robertslm@csus.edu)
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11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Tue, 28 Nov 2023 00:11:52 GMT
Linda Roberts (robertslm): Approved for CHEM Committee Chair
2. Wed, 29 Nov 2023 19:35:04 GMT
Susan Crawford (crawford): Approved for CHEM Chair
3. Wed, 06 Dec 2023 23:44:46 GMT
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
4. Thu, 22 Feb 2024 00:08:47 GMT
Shannon Datwyler (datwyler): Approved for NSM Dean

Date Submitted: Tue, 28 Nov 2023 00:11:11 GMT

Viewing: CHEM 164 : Advanced Biochemistry Laboratory

Last edit: Tue, 28 Nov 2023 00:11:10 GMT

Changes proposed by: Linda Roberts (101010256)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Linda Roberts	robertslm@csus.edu	916-278-3892

Catalog Title:

Advanced Biochemistry Laboratory

Class Schedule Title:

Advanced Biochemistry Lab

Academic Group: (College)

NSM - Natural Sciences & Mathematics

Academic Organization: (Department)

Chemistry

Will this course be offered through the College of Continuing Education (CCE)?

No

Catalog Year Effective:

Spring 2024 (2023/2024 Catalog)

Subject Area: (prefix)

CHEM - Chemistry

Catalog Number: (course number)

164

Course ID: (For administrative use only.)

108881

Units:

3

Is the only purpose of this change to update the term typically offered or the enforcement of existing prerequisites at registration?

No

In what term(s) will this course typically be offered?

Fall, Spring

Does this course require a room for its final exam?

Yes, final exam requires a room

This course complies with the credit hour policy:

Yes

Justification for course proposal:

Adding biochemistry lecture prerequisites to the course description as passing a biochemistry lecture course is required for advanced biochemistry lab.

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)

Capstone course which emphasizes biochemical laboratory experimental design and trouble-shooting skills. Common biochemistry laboratory techniques are applied in semester-long individual student projects. Discussion one hour, laboratory six hours.

Are one or more field trips required with this course?

No

Fee Course?

No

Is this course designated as Service Learning?

No

Is this course designated as Curricular Community Engaged Learning?

No

Does this course require safety training?

Yes

Does this course require personal protective equipment (PPE)?

Yes

Does this course have prerequisites?

Yes

Prerequisite:

CHEM 160A or CHEM 161 or equivalent; CHEM 162 or equivalent; ENGL 20 or an equivalent second semester composition course.

Prerequisites Enforced at Registration?

Yes

Does this course have corequisites?

No

Graded:

Letter

Approval required for enrollment?

No Approval Required

Course Component(s) and Classification(s):

Discussion
Laboratory

Discussion Classification

CS#04 - Lecture /Recitation (K-factor=1 WTU per unit)

Discussion Units

1

Laboratory Classification

CS#16 - Science Laboratory (K-factor=2 WTU per unit)

Laboratory Units

2

Is this a paired course?

No

Is this course crosslisted?

No

Can this course be repeated for credit?

No

Can the course be taken for credit more than once during the same term?

No

Description of the Expected Learning Outcomes and Assessment Strategies:

List the Expected Learning Outcomes and their accompanying Assessment Strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers). Click the plus sign to add a new row.

	Expected Learning Outcome	Assessment Strategies
1	Design and complete an individual independent research project within a team structure.	<ul style="list-style-type: none"> Literature review activity culminating in group oral presentation Research project plan (team portions and individual portions) delivered as group oral presentation Individual research project poster presentation in department semester poster session
2	Collaborate with others to effectively plan research goals and efficiently and productively use laboratory resources	<ul style="list-style-type: none"> Methods review and development group activity Equipment and resources planning group activity Research project plan (team portions and individual portions) delivered as group oral presentation
3	Trouble-shoot experiments on an individual and group basis.	<ul style="list-style-type: none"> Analyzing data from scenarios based on planned experimental methods (e.g. assessing method for culturing bacteria for protein expression; analyzing data from cell lysis)
4	Disseminate scientific research results and conclusions in multiple formats.	<ul style="list-style-type: none"> Final project paper written in Biochemistry journal format. Final project poster presentation to Chemistry department.

Attach a list of the required/recommended course readings and activities:

Syllabus Chem 164 F2022 original.docx

Is this course required in a degree program (major, minor, graduate degree, certificate?)

Yes

Has a corresponding Program Change been submitted to Workflow?

No

Identify the program(s) in which this course is required:**Programs:**

BS in Biochemistry

BA in Chemistry (Biochemistry)

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Knowledge of human cultures and the physical and natural world
Intellectual and practical skills
Personal and social responsibility
Integrative learning

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?

No

Key: 672