

CHEM 255: TOPICS IN CHEMISTRY EDUCATION

In Workflow

1. CHEM Committee Chair (101029561@csus.edu)
2. CHEM Chair (tjsavage@csus.edu)
3. NSM College Committee Chair (mikkel.jensen@csus.edu)
4. NSM Dean (datwyler@csus.edu)
5. Academic Services (catalog@csus.edu)
6. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
7. Dean of Undergraduate and Graduate (Dean of Undergraduate and Graduate@csus.edu)
8. Catalog Editor (catalog@csus.edu)
9. Registrar's Office (k.mcfarland@csus.edu)
10. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. 2026-04-07T14:49:18Z
Roy Dixon (rdixon): Approved for CHEM Committee Chair
2. 2026-05-05T21:48:37Z
Thomas Savage (tjsavage): Approved for CHEM Chair
3. 2026-05-06T22:32:57Z
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
4. 2026-05-06T22:39:06Z
Chris Taylor (ctaylor): Approved for NSM Dean

Date Submitted: 2026-04-07T14:48:31Z

Viewing: CHEM 255 : Topics in Chemistry Education

Last edit: 2026-08-28T20:58:11Z

Changes proposed by: Roy Dixon (101029561)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Yujuan Liu	y.liu@csus.edu	916-278-4175

Catalog Title:

Topics in Chemistry Education

Class Schedule Title:

Topics in Chemistry Education

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 2027 (2026/2027 Catalog)

Subject Area: (prefix)

CHEM - Chemistry

Catalog Number: (course number)

255

Course ID: (For administrative use only.)

202406

Units:

3

Is the ONLY purpose of this change to update the term typically offered or the enforcement of existing requisites 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:

The main change is just the catalog description because the current course description in the catalog is vague and identical to that of CHEM 250. The new course description could help students understand the specific purpose, content, and relevance of the course. This would also have the potential to attract more students in the department of chemistry and other departments in the NSM to enroll.

This course will benefit students in the graduate program, many of whom serve as Teaching Assistants during their studies and/or plan to pursue teaching careers at community colleges or four-year universities after graduation.

The course will also benefit undergraduate students who are interested in developing teaching skills and/or pursuing graduate studies.

Course Description: (Not to exceed 90 words and language should conform to catalog copy.)

Lecture course providing intensive coverage of advanced topics in chemistry education, designed for students interested in teaching chemistry or other STEM disciplines at the college level. Areas of focus may include strategies for course design, instructional methods, classroom engagement, and assessment of student learning. A variety of learning methodologies may be employed, such as literature review, team projects, oral presentations, and written assignments. May be team-taught.

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?

No

Does this course require personal protective equipment (PPE)?

No

Does this course have prerequisites?

Yes

Prerequisite:

enrollment in Chemistry master's degree program or permission of instructor.

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):

Lecture

Lecture Classification

CS#02 - Lecture/Discussion (K-factor=1WTU per unit)

Lecture Units

3

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 build a course from scratch.	writing assignments that cover the week's reading and class discussion
2	Design and present clear, well#structured lectures	lesson plans and a 30-min micro-teaching presentation
3	Facilitate a discussion that includes all participants.	class discussions and online discussion board based on the week's lecture coverage.
4	Manage student behavior through effective policies and expectations.	class discussions and online discussion board on management strategies regarding classroom issues
5	Build an online teaching portfolio, which includes a CV, teaching philosophy statement, and a teaching narrative.	writing assignments such as CV, teaching philosophy statement, a teaching narrative, and an online teaching portfolio at the end of the semester.
6	Critique and justify the selection of teaching methods against learning outcomes, context constraints, and research evidence.	writing assignments based on the literature and the week's class discussion
7	Reflect on experiences and attitudes about teaching through discussion and surveys.	writing assignments that cover the week's reading and class discussion

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

Chem 255_Syllabus.docx

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

No

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

Graduate (Masters) Learning Goals:

Disciplinary knowledge
Communication
Critical thinking/analysis
Information literacy
Professionalism

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

Is this a Graduate Writing Intensive (GWI) course?

No

Please attach any additional files not requested above:

Re_ CHEM 255.pdf

Key: 695