

GEOL 223: SEMINAR IN ADVANCED GEOCHEMISTRY

In Workflow

1. GEOL Committee Chair (amy.wagner@csus.edu)
2. GEOL Chair (cornwell@csus.edu)
3. NSM College Committee Chair (tsk@csus.edu)
4. NSM Dean (datwyler@csus.edu)
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10. Registrar's Office (w lindsey@csus.edu)
11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Mon, 01 Mar 2021 18:51:42 GMT
Amy Wagner (amy.wagner): Approved for GEOL Committee Chair
2. Mon, 01 Mar 2021 19:01:55 GMT
Kevin Cornwell (cornwell): Approved for GEOL Chair
3. Thu, 04 Mar 2021 00:08:42 GMT
Thomas Krabacher (tsk): Rollback to GEOL Chair for NSM College Committee Chair
4. Thu, 04 Mar 2021 15:11:30 GMT
Kevin Cornwell (cornwell): Rollback to GEOL Committee Chair for GEOL Chair
5. Tue, 16 Mar 2021 19:02:22 GMT
Amy Wagner (amy.wagner): Approved for GEOL Committee Chair
6. Tue, 16 Mar 2021 20:58:57 GMT
Kevin Cornwell (cornwell): Approved for GEOL Chair
7. Wed, 17 Mar 2021 22:15:31 GMT
Thomas Krabacher (tsk): Approved for NSM College Committee Chair
8. Wed, 17 Mar 2021 22:18:47 GMT
Shannon Datwyler (datwyler): Approved for NSM Dean

Date Submitted: Mon, 01 Mar 2021 17:51:56 GMT

Viewing: GEOL 223 : Seminar in Advanced Geochemistry

Last edit: Tue, 16 Mar 2021 19:02:04 GMT

Changes proposed by: Amy Wagner (216313696)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Amy Wagner	amy.wagner@csus.edu	916-278-5136

Catalog Title:

Seminar in Advanced Geochemistry

Class Schedule Title:

Seminar in Adv. Geochemistry

Academic Group: (College)

NSM - Natural Sciences & Mathematics

Academic Organization: (Department)

Geology

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

No

Catalog Year Effective:

Fall 2022 (2022/2023 Catalog)

Subject Area: (prefix)

GEOL - Geology

Catalog Number: (course number)

223

Course ID: (For administrative use only.)

200973

Units:

3

Changes to a course's units impact any related programs. As a result, a corresponding change must also be submitted for those programs

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

Does this course replace an existing experimental course?

No

This course complies with the credit hour policy:

Yes

Justification for course proposal:

Justification for all Geology graduate course proposals:

The Geology department has a small graduate program (approximately 12 students admitted per year) that tends to be split between a 'rock' and 'water' focus. Students take 9 units of core courses that are scheduled to be taken over two years. The department offers two graduate electives each semester, one with more of a rock focus and another with more of a water focus so students have graduate electives that are relevant to their primary area of research.

The Geology department has a robust undergraduate program, teaches a number of general education mega-sections, and has faculty with active research programs (and, thus, course release and buyout). Therefore, having tenured and tenure track faculty with available WTU to teach the graduate courses has been challenging. Additionally, the graduate courses are not listed as being repeatable for credit, further limiting the options that can be offered each semester.

In an effort to provide more flexibility for our graduate students to be taught by our own Geology faculty and maintain a level of continuity, we are proposing to move towards more general course descriptions and offer many of the courses as 'Seminar in' and change all the courses to be repeatable for credit. (See attached email from OGS regarding this and financial aid). It is likely that graduate students will not end up repeating any courses because more broad course descriptions will provide the flexibility for more faculty to teach each course. Offering our graduate courses in this way will benefit the graduate students in our department by ensuring 1) a variety of elective topics are offered each semester, 2) tenured and tenure-track faculty are teaching the courses, and 3) the ability to repeat a course for credit without having to petition for an exception with OGS.

GEOL 223 course specific justification:

Changing the course from 4 units to 3 by reducing an hour of lecture. This change will make sure graduate students can take this course and one of the required core courses without exceeding 6 graduate units. Also updating course description and learning objectives to reflect the broader content range of the course. Laboratory unit may include experiments, problem sets, water chemistry modeling, etc to be determined by the instructor and specifically outlined in the course syllabus.

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

Advanced topics covering the geochemistry on Earth and of Earth materials. Topics may include: thermodynamics and kinetics of geological environments, silicate and carbonate systems, major element geochemistry, trace and rare earth element geochemistry, stable and radiogenic isotopes; applications to studies of aqueous, pedogenic, marine, igneous, sedimentary, or metamorphic environments; analysis of geochemical aspects of contemporary resource, environmental, and paleoenvironmental problems.

Are one or more field trips required with this course?

No

Fee Course?

No

Is this course designated as Service Learning?

No

Does this course require safety training?

No

Does this course require personal protective equipment (PPE)?

No

Course Note: (Note must be a single sentence; do not include field trip or fee course notations.)

May be taken for credit multiple times if covering different topics.

Does this course have prerequisites?

Yes

Prerequisite:

CHEM 1A or equivalent, graduate-level status in Geology, or instructor permission.

Prerequisites Enforced at Registration?

No

Does this course have corequisites?

No

Graded:

Letter

Approval required for enrollment?

No Approval Required

Course Component(s) and Classification(s):

Laboratory

Lecture

Laboratory Classification

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

Laboratory Units

1

Lecture Classification

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

Lecture Units

2

Is this a paired course?

No

Is this course crosslisted?

No

Can this course be repeated for credit?

Yes

How many times can the course be taken (not including first time passed)?

4

Total credits allowed (including first time passed)

12

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

No

Description of the Expected Learning Outcomes: Describe outcomes using the following format: 'Students will be able to: 1), 2), etc.'

By the end of the course, students will be able to:

- 1) Describe fundamental concepts of the geochemistry of Earth materials and/or systems
- 2) Apply geochemical concepts to a variety of geologic problems

- 3) Analyze and solve advanced geochemical problems
- 4) Interpret, evaluate and discuss geochemical applications as reported in scientific literature

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

GEOL223_Syllabus.docx

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above.

Problem sets/Homework (ELOs 1-3)

Written summaries (ELO 4)

Exams (ELOs 1-4)

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:

Critical thinking/analysis

Information literacy

Disciplinary knowledge

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:

Course repeat OGS.pdf

Reviewer Comments:

Thomas Krabacher (tsk) (Thu, 04 Mar 2021 00:08:42 GMT): Rollback: Proposal being rolled back in order for dept. to check on (1) any issues with repeating a course with same number for grade; (2) Any financial aid implications for repeating a course with same number; (2) advisability of making the justification more student-oriented. Amy W. has the details, if needed.

Kevin Cornwell (cornwell) (Thu, 04 Mar 2021 15:11:30 GMT): Rollback: Amy, this is for you to look at again...

Key: 2401