

\_\_\_\_\_ Council President

\_\_\_\_\_ Council Treasurer

\_\_\_\_\_ Council Secretary

\_\_\_\_\_ Council Vice President

\_\_\_\_\_ Student Body President

\_\_\_\_\_ Student Body Vice President

Area: Global and Multicultural Awareness

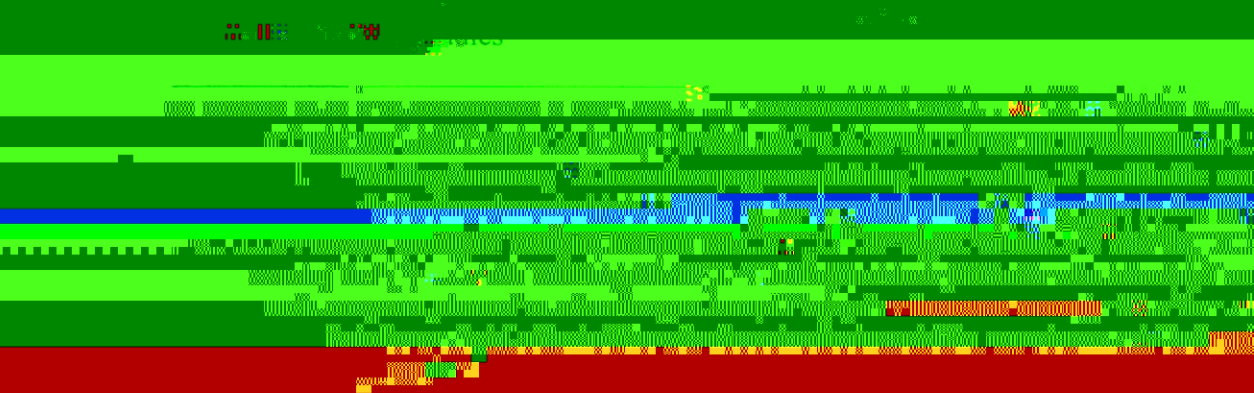
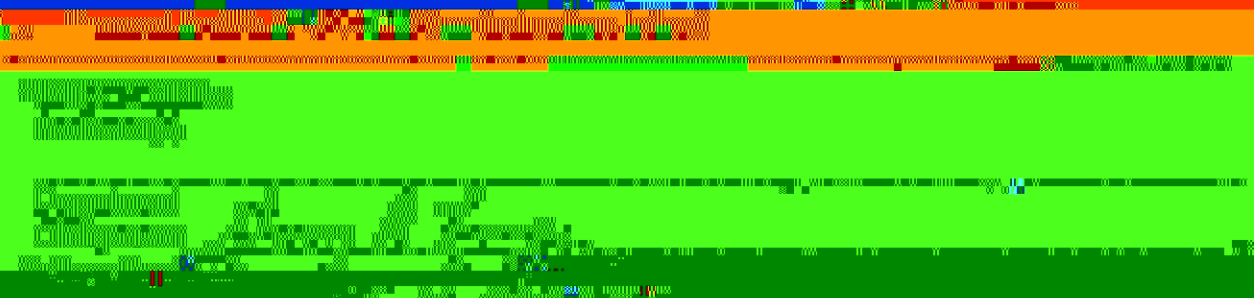
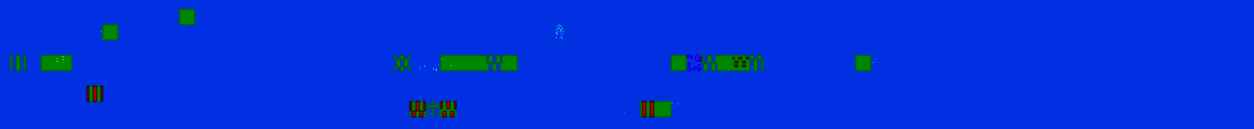
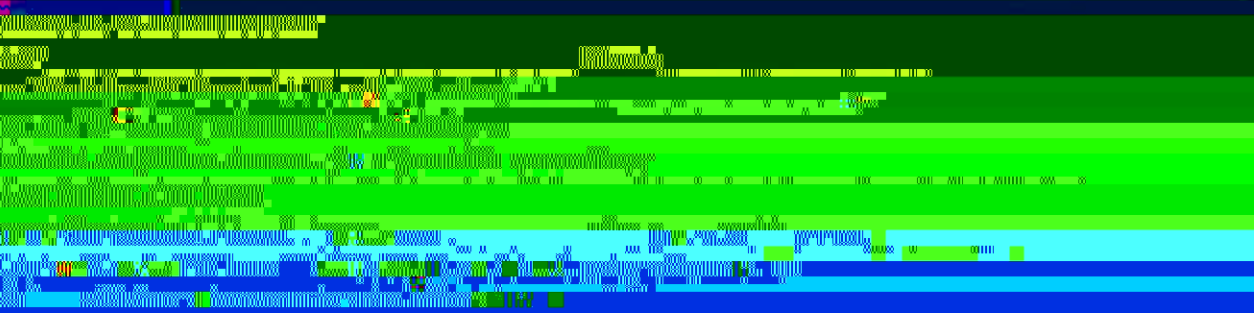
Intensive (include W cover sheet)

Approvals

\_\_\_\_\_

\_\_\_\_\_

REQUEST FOR APPROVAL AT U.S. DESIGNATION



III. Community Values.

1. The proposed project area is located within the National System of Public Lands, which is managed by the Bureau of Land Management (BLM). The project area is situated in a rural area with a mix of agricultural and natural resources. The project area is located within the National System of Public Lands, which is managed by the Bureau of Land Management (BLM). The project area is situated in a rural area with a mix of agricultural and natural resources.

## I. Writing Summary

The CHEM 390/490 sequence is proposed (together) as a writing-intensive course. The sequence is taught every year and is required for three tracks of the CHEM degree. It is

taken by junior and senior CHEM majors. This writing intensive sequence is seen as an opportunity for students to practice professional levels of scientific communication - reading scientific papers, writing up procedures, communicating and interpreting/critiquing the results of other scientists, producing scientific publications, including a research proposal, and effectively presenting a research poster and a seminar.

The students practice the following kinds of writing:

1. Writing to demonstrate reading skills [experimental laboratory procedures]:

Students are given a published reference to a standard assay (which is usually obtained as a "kit") and are required to translate the "Methods" section of the paper into a step-by-

step procedure that they would follow if they were doing the experiment in lab. As working chemists/researchers, proper maintenance of a notebook that includes reproducible procedures is a daily requirement. The students are evaluated on detail and clarity of writing, as well as scientific feasibility.

2. Writing to demonstrate knowledge transfer from oral presentations.

Students write content and critical reports based on their attendance at five seminars given by guest scientists. This exercise emphasizes to students the importance of clear

communication. It helps them distinguish between important and trivial details in scientific

## I. Catalog Description

CHEM 490W Chemistry Seminar III

1 class hour, 1 credit

(1c-01-1cr)

Prerequisite: CHEM 390

Description: A discussion of recent trends in chemical thought. Oral and written reports on assigned readings, library, or laboratory research. Guest lecturers. Seminar course intended to

provide knowledge to students regarding effective oral and written scientific communication

Students will refine their skills in reading and evaluating research papers from the literature, they will write a formal research paper, and present a research seminar. The combination of CHEM 390-490 counts as one writing-intensive course.

## II. Course Outcomes

CHEM 390/490 serve together as one writing-intensive course. In the second semester, students choose a topic of interest within chemistry (broadly defined) and develop written and oral reports on the topic. These reports include:

- 1) A detailed evaluation of at least one primary research article (published within the last 5 years) as performed in the journal club format in CHEM 390.
- 2) Significant background information, allowing the reader/audience to understand the research in the context of what is already known or not known and to assess the significance of the

1.	<u>Introduction: Choosing a Topic</u>	1 hour
2.	<u>Writing Assignment 1: Statement of Topic</u>	1 hour
3.	<u>Writing Assignment 2: Professional Ethics</u>	1 hour
4.	<u>Writing Assignment 3: Research Paper</u>	1 hour

2. American Chemical Society *Undergraduate Professional Education in Chemistry: ACS Guidelines and Evaluation Procedures for Bachelor's Degree Programs*, Washington, DC (2008).

A4 Is this course to be a dual-level course? If so, please note that the graduate approval occurs after the undergraduate.

No

A5 If this course may be taken for variable credit, what criteria will be used to relate the credits to the learning experience of each student? Who will make this determination and by what procedures?

No variable credit

A6 Do other higher education institutions currently offer this course? If so, please list

**This course proposal is part of a Chemistry Department program revision. The sum of all the changes included in this revision will be a reduction of 9-10 workload hours, and three preps, for the department's faculty.**

**C2 What other resources will be needed to teach this course and how adequate are the current resources? If not adequate, what plans exist for achieving adequacy? Reply in**



**Sample Assignment 1: Statement of Topic (50 points)**

A concise (two page maximum) description of the topic chosen. Attach a paper copy of at least one primary research article to be analyzed in depth. Also state the experimental technique that you will focus on in your written and oral report.

*Grading Rubric: Points are awarded for clarity, concision, and accuracy.*

The Department Chair shall provide a copy of this agreement to each faculty member assigned to teach a Writing-Intensive course.

Each faculty member assigned to teaching a Program Writing Intensive Course agrees to the following criteria:

- Writing assignments are an integral part of the course, which promise to enhance student learning (not 'exercises in writing for writing's sake').
- Writing assignments will include various forms of writing such as case studies, laboratory reports, journals, letters, memos, formal essays, research articles, project or grant proposals, etc.
- The improvement of student writing is a clear objective of the course.
- Students will be provided with written instructions that cover major criteria for the evaluation of the assignment(s).
- Students will receive guidance in conceiving, organizing, and presenting written material in ways

