

**PROPOSAL TO THE SENATE COMMITTEE ON EDUCATIONAL POLICY**  
Proposal to Modify the Environmental Chemistry Option

**RECEIVED**  
**DEC 14 2005**  
**OFFICE OF THE SENATE**

**TITLE OF THE PROPOSAL:** Environmental Chemistry Option Revision

**SPONSOR:** Department of Chemistry  
[contact Prof. Patricia A. Shapley, [pshapley@uiuc.edu](mailto:pshapley@uiuc.edu), 244-4186]

**BRIEF DESCRIPTION:**

This option is designed to provide a background in environmental chemistry that is sufficient in breadth and depth to prepare a person to work as an environmental chemist in the public or private sector and/or to pursue an advanced degree in the field. Students who complete this option will be certified in environmental chemistry by the American Chemical Society (ACS). The Environmental Chemistry Option is based on the Specialized Curriculum in Chemistry. Therefore, to be certified in this option, a student must satisfy all of the requirements for the Specialized Curriculum in Chemistry. Students will take a 3 hour, 300-level course in environmental chemistry and 3, 3 hour, upper level technical courses in environmental areas. These courses can be used as part of the required 14 hours of technical electives for the Specialized Curriculum in Chemistry.

1. Basic course (3 hours)
  - a. CHEM 360, Chemistry of the Environment
  - b. CEE 330, Environmental Engineering
  
2. Advanced courses (minimum 9 hours)
  - a. CHEM 460, Green Chemistry
  - b. IB 485, Environmental Toxicology
  - c. GEOL 380, Environmental Geology
  - d. CEE 443, Env Eng Principles, Chemical
  - e. CHEM 499, Senior Thesis. Thesis research on an environmental topic
  - f. Students may select other 400-level courses dealing with economic, engineering, biological aspects of environmental chemistry upon consultation with the faculty advisor.

**JUSTIFICATION:**

The Department of Chemistry currently has an approved Environmental Chemistry Option for undergraduate majors. However, the original list of courses is obsolete. Some of the courses on the list were "Topics" courses and are no longer offered. Others are offered only infrequently. Chemistry has developed two new courses that are well suited to this program and should be included. These are CHEM 360, Chemistry of the Environment, and CHEM 460, Green Chemistry. The original program didn't provide flexibility for students to take advantage of new courses in environmental areas. In this proposal, students have the option of choosing upper level environmental courses outside the recommended list upon consultation with the Environmental Chemistry advisor (Prof. Patricia Shapley).

**BUGETARY AND STAFF IMPLICATIONS:**

None. Students in the Environmental Chemistry Option will take existing courses.



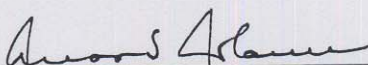
### GUIDELINES FOR UNDERGRADUATE EDUCATION:

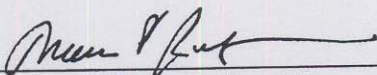
This proposal will modify the recommended course list for an existing undergraduate curriculum which meets the guidelines for undergraduate education.

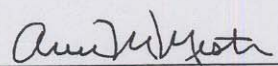
1. One of the recommended courses, CHEM 460, uses a discussion format where students must critically evaluate industrial processes for their sustainability and impact on society. Students present reports in oral and written format and debate alternative solutions in class. This, and the other upper level science and engineering courses, promote critical thinking in a qualitative and a quantitative manner.
2. The Environmental Option will improve the students' understanding of the interplay of technology, human culture, and nature.
3. The Environmental Option will broaden the professional preparation of chemistry majors and allow them to work as an environmental chemists in the public or private sector and/or to pursue advanced degrees in the field. For those students who will pursue traditional jobs in the chemistry field, this option will better prepare them to make personal and political decisions related to technology and the environment.

**PROPOSED EFFECTIVE DATE:** Fall 2006

#### CLEARANCES:

  
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Professor Gregory S. Girolami  
Head, Department of Chemistry

  
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Professor Thomas B. Rauchfuss  
Director, School of Chemical Sciences

  
\_\_\_\_\_  
College of Liberal Arts and Sciences

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Office of the Provost, UIUC

#### STATEMENT FOR PROGRAMS OF STUDY CATALOG:

Environmental Chemistry Option

Email: [debe@uiuc.edu](mailto:debe@uiuc.edu)

This option is designed to provide a background in environmental chemistry that is sufficient in breadth and depth to prepare a person to work as an environmental chemist in the public or private sectors and/or to pursue an advanced degree in the field. Students who complete this option will be certified in environmental chemistry by the American Chemical Society (ACS).



The Environmental Chemistry Option is based on the Specialized Curriculum in Chemistry. Therefore, to be certified for this option, a student must satisfy all of the requirements for the Specialized Curriculum in Chemistry. Students will take a 3-hour, 300-level course in environmental chemistry and three 3-hour, upper level technical courses in environmental areas. These courses can be used as part of the required 14 hours of technical electives for the Specialized Curriculum in Chemistry.

#### Requirements

3 hours

##### Basic Courses

Select one of the following:

CHEM 360- Chemistry of the Environment

or

CEE 330- Environmental Engineering

Minimum

9 hours

##### Advanced Courses

Select three courses from the following:

CHEM 460- Green Chemistry

CEE 443- Env Eng Principles, Chemical

GEOL 380- Environmental Geology

IB 485- Environmental Toxicology

CHEM 499- Senior Thesis- thesis research on an environmental topic

Other 400-level courses dealing with economic, engineering, biological aspects of environmental chemistry upon consultation with the faculty advisor.

Post-it® Fax Note	7671	Date 2/4	# of pages 1
To Diana Morris		From LAS	
Co./Dept.		Co.	
Phone #		Phone # 36200	
Fax # 34848		Fax #	



# College of Liberal Arts & Sciences

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

February 6, 2006

Kristi Kuntz, Assistant Provost  
Swanlund Administration Building

Dear Provost Kuntz:

It has just come to my attention that the campus now prefers that we use the word "concentration" for all subdivisions of undergraduate majors that warrant listing on transcripts. On behalf of the College of Liberal Arts and Science, I ask that you treat the Environmental Chemistry Option in that light. Please change the title of the proposal to Environmental Chemistry Concentration. Feel free to edit all other parts of the document to reflect this change in nomenclature, in order to be consistent with Banner usage. Thank you for considering this request.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ann M. Mester'.

Ann M. Mester  
Assistant Dean