

4-6-2009

Environmental Chemistry Concentration Revision in the Environmental Science Major

The College at Brockport, College Senate

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The College at
BROCKPORT
 STATE UNIVERSITY OF NEW YORK
 College Senate
 350 New Campus Drive
 Brockport, NY 14420-2925

RECEIVED
 APR 10 2009
 The College at Brockport
 Office of the President

Resolution # 20
 2008-2009
College Senate

New Resolution:
 Supersedes Res #:

TO: Dr. John R. Halstead, College President

FROM: The College Senate: *April 6, 2009*

RE: \rightarrow I. Formal Resolution (*Act of Determination*)
 II. Recommendation (*Urging the Fitness of*)
 III. Other, For Your Information (*Notice, Request, Report, etc.*)

COLLEGE SENATE
 SUNY College at Brockport
 APR 29 2009
 350 New Campus Drive
 Brockport, NY 14420-2925

SUBJ: ***Environmental Chemistry Concentration Revision in the
 Environmental Science Major*** (routing #23 08-09 UC)

Signed: *T. M. Rao* Date: *4/9/09*
 (*Thambrahalli M. Rao, 2008-09 College Senate President*)

Please fill out the bottom portion and follow the distribution instructions at the end of this page.

TO: T.M. Rao, The College Senate President

FROM: John R. Halstead, College President

RE: \rightarrow I. Decision and Action Taken on Formal Resolution (circle choice)
 a. Accepted - Implementation Effective Date: *Fall 2009*
 b. Deferred for discussion with the Faculty Senate on ___/___/___
 c. Unacceptable for the reasons contained in the attached explanation
 II, III. Response to Recommendation or Other/FYI
 a. Received and acknowledged ___/___/___
 b. Comment: _____

Signed: *JRH* Date: *4/24/09*
 (*Dr. John R. Halstead, President, SUNY College at Brockport*)

DISTRIBUTION

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 PROVOST & VICE PRESIDENT(S) COPIES: Assistant Provost, Dean(s), Academic Advisement, Registrar, Other: _____
 DEAN(S) COPY: Department Chair(s), Other: _____
 COLLEGE SENATE COPIES: Originator, College Senate Website, Other: _____

DEADLINE FOR SUBMISSIONS: FEBRUARY 28

Incomplete proposals or proposals received after the deadline may not be reviewed until next semester.

INSTRUCTIONS:

- Submit only complete proposals.
- Proposals must be prepared individually in Word format using committee guidelines (guidelines online).
- Fill out this cover page for each proposal (available online at www.brockport.edu/collegesenate).
- Email proposal and this cover page to senate@brockport.edu and facprez@brockport.edu.
- All updates must be resubmitted to the Senate office with the original cover page including routing number.
- Questions? Call the Senate office at 395-2586 or the appropriate committee chairperson.

1. PROPOSAL TITLE:

Please be somewhat descriptive, for example, *Graduate Probation/Dismissal Proposal* rather than *Graduate Proposal*.

Environmental Chemistry Concentration Revision in the Environmental Science Major
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2. BRIEF DESCRIPTION OF PROPOSAL:

Restructure and rename the Environmental Chemistry Concentration of the Environmental Science major (to be called the Concentration in Environmental Chemical Analysis) to attract more students to an area of environmental science with excellent post-graduation employment opportunities for highly technically trained individuals.

3. ANTICIPATED DATE OF IMPLEMENTATION:

Fall 2009

Enter date this will be effective if passed by the Senate.

4. SUBMISSION & REVISION DATES: PLEASE PUT A DATE ON ALL UPDATED DOCUMENTS TO AVOID CONFUSION.

<i>First Submission</i>	<i>Updated on</i>	<i>Updated on</i>	<i>Updated on</i>
November 25, 2008			

RECEIVED AT SENATE OFFICE

5. SUBMITTED BY: (contact person)

<i>Name</i>	<i>Department</i>	<i>Phone</i>	<i>Email</i>
James M. Haynes	Env. Sci. & Biology	x-5783	jhaynes@brockport.edu
Stephen A. Godleski	Chemistry	x-5595	sgodlesk@brockport.edu

6. COMMITTEES TO COPY: (Senate office use only)

Standing Committee	Forwarded To	Date
<input type="checkbox"/> Enrollment Planning & Policies	Committee	11/25/08
<input type="checkbox"/> Faculty & Professional Staff Policies	Executive Committee	3/9/09
<input type="checkbox"/> General Education & Curriculum Policies	Senate	3/23/09
<input type="checkbox"/> Graduate Curriculum & Policies	Senate President's Signature	4/8/09
<input type="checkbox"/> Student Policies	College President's Signature	4/9/09
<input checked="" type="checkbox"/> Undergraduate Curriculum & Policies	To Vice Provost	
	Other	

7. How does this affect transfer students.

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2. Side by side comparison of course and credit requirements in the old Concentration in Environmental Chemistry and the new Concentration in Environmental Chemical Analysis in Environmental Science major.

Change	Old Program Course	Credits	New Program Course	Credits
N	ENV 202 Environmental Science	4	ENV 202 Environmental Science	4
N	ENV 204 Biology of Organisms	4	ENV 204 Biology of Organisms	4
N	ENV 303 Ecology	4	ENV 303 Ecology	4
N	ENV 452 Environ Laws & Regs	3	ENV 452 Environ Laws & Regs	3
N	ENV 492 Global Environ Issues	3	ENV 492 Global Environ Issues	3
N	CHM 205 College Chemistry I	4	CHM 205 College Chemistry I	4
N	CHM 206 College Chemistry II	4	CHM 206 College Chemistry II	4
N	CHM 303 Analytical Chemistry	4	CHM 303 Analytical Chemistry	4
N	GEL 201 Physical Geology	4	GEL 201 Physical Geology	4
N	MTH 201 Calculus I	4	MTH 201 Calculus I	4
N	Core Curriculum Credits	38	Core Curriculum Credits	38
N	CHM 301 Chemical Safety	1	CHM 301 Chemical Safety	1
N	CHM 305 Organic Chemistry I	4	CHM 305 Organic Chemistry I	4
N	CHM 306 Organic Chemistry II	4	CHM 306 Organic Chemistry II	4
N	GEL 457 Environ Geochemistry	4	GEL 457 Environ Geochemistry	4
Y	MTH 202 Calculus II	3	ENV 423 Pollution Biology	3
Y	MTH 203 Calculus III	3	ENV 436 Water Quality Analysis	4
Y	PHS 235 Physics I	4	ENV 462 Aquatic Toxicology	4
Y	PHS 240 Physics II	4		
Y	CHM 401 Chemistry Seminar I	1		
Y	CHM 402 Chemistry Seminar II	1		
Y	CHM 405 Physical Chemistry I	3		
Y	CHM 406 Physical Chemistry II	3		
Y	Required Credits	35	Required Credits	24
			ENV 419 Limnology	3
			ENV 421 Limnology Laboratory	2
Y	CHM 408/409 Phys Methods Lab	2	ENV 437 Biostatistics	3
Y	ENV 436 Water Quality Analysis	4	ENV 476 Animal Ecophysiology	3
N	ENV 488 Environ Imp Analysis	4-6	ENV 488 Environ Imp Analysis	4-6
N	ENV 498 Collaborative Research	1-3	ENV 498 Collaborative Research	1-3
Y	Elective Credits	2-4	Elective Credits	5
Y	Total credits:	75-77	Total credits:	67

3. Brief rationale for changes.

The Environmental Chemistry Concentration began with the Environmental Science major in 2002 and requires a minimum of 75 credits, a heavy academic load for students. Consequently, two or fewer students have been enrolled in the concentration in each year since the inception of the major. An environmental chemist is a professional chemist with additional training in environmental science. Hence, the Environmental Chemistry Concentration was a major in Chemistry, plus the core curriculum of the Environmental Science major and a few elective credits. After six years of low student demand for the concentration, it is time to try a new approach.

An important segment of the job market for environmental scientists is in government and private laboratories that analyze environmental contaminants using wet chemistry and highly technical

instrumental methods. The proposed new curriculum removes basic mathematics and science courses required of Chemistry majors and adds more technical courses focusing on pollution, toxicology and water quality analysis that will make graduates much more marketable for jobs dealing with the environmental applications of chemistry. At the same time, the number of credits required will be reduced by 10-12 to bring the number of credits required in the revised concentration more in line with the other concentrations in the Environmental Science major. We are cautiously optimistic that the proposed changes will attract a new population of science majors to The College at Brockport, and that they will greatly improve student success in our program and beyond.

Each student in the Environmental Chemical Analysis Concentration will also earn a minor in Chemistry, a strong selling point in the environmental science job market.

4. Description of new courses. **(None)**

5. Staffing Issues. **(None)**

6. Resources and facilities that may be needed to implement the program. **(None)**

7. Academic administration commentary.

a. Letter of recommendation from the chair—on behalf of the ESB and Chemistry Departments, the chairmen of ESB and Chemistry drafted this document. Therefore, they approve its contents, and a separate letter is not needed.

b. Approval from Dean Appelle, School of Letters and Sciences.

I approve the attached changes to the Environmental Chemical Analysis Concentration.

Stuart Appelle, Dean
Letters and Sciences