

2-27-2012

# Revision of the Aquatic Track in the Environmental Science Major

The College at Brockport, College Senate

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senate@brockport.edu  
brockport.edu/collegesenate

Supersedes Res #: \_\_\_\_\_

TO: Dr. John R. Halstead, College President

FROM: The College Senate: *February 27, 2012*

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

SUBJ: *Revision of the Aquatic Track in the Environmental Science Major (#19\_11-12UC)*

Signed: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
*(John P. Daly 2011-2012, College Senate President)*

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

TO: John P. Daly, College Senate President

FROM: John R. Halstead, College President

- RE: I. Decision and Action Taken on Formal Resolution (circle choice)  
 a. Accepted - **Implementation Effective Date: Fall 2012**  
 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: \_\_\_\_\_ Date: \_\_\_\_\_  
*(Dr. John R. Halstead, President, The College at Brockport)*

**DISTRIBUTION**

Upon approval, the College President will forward copies of resolutions to his staff who will, in turn, forward copies to their staff. The College Senate Office will post resolutions to the College Senate Web at <http://www.brockport.edu/collegesenate/resolutions>.

**COLLEGE SENATE OFFICE  
RESOLUTION PROPOSAL COVER PAGE  
DEADLINE FOR SUBMISSIONS: FEBRUARY 28**

Incomplete proposals will be returned and proposals received after the deadline may not be reviewed until next semester.

<b>Routing Number</b> <i>Routing # assigned by Senate Office 2011-2012</i>	<b>#19_11-12UC</b> <i>Use routing number and title in all reference to this proposal.</i>
<b>This Proposal Replaces Resolution</b>	

**INSTRUCTIONS**

- Use committee guidelines and General Education forms available at [brockport.edu/collegesenate/proposal.html](http://brockport.edu/collegesenate/proposal.html).
- Prepare ONE complete document in **Word format**: include this proposal cover page, proposal, attachments and support letters from your department chair and dean.
- **Locate the Resolution # and date this proposal will replace at our "Approved Resolutions" page on our Web site.**
- Do not submit your proposal as a .pdf file unless using Gen Ed forms. They are difficult to merge.
- Email completed proposal to [senate@brockport.edu](mailto:senate@brockport.edu). (General Education Proposals go to [dlamphron@brockport.edu](mailto:dlamphron@brockport.edu) first.)
- All revisions must be resubmitted to [senate@brockport.edu](mailto:senate@brockport.edu) 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, ie. *Graduate Probation/Dismissal Proposal* rather than *Graduate Proposal*.

**Revision of the Aquatic Track in the Environmental Science Major**

2. **BRIEF DESCRIPTION OF PROPOSAL:**

To provide a greater aquatic focus in the elective courses of the Aquatic Track

3. **WILL ADDITIONAL RESOURCES AFFECTING BUDGET BE NEEDED?**  NO  YES **EXPLAIN YES**

4. **DESCRIBE ANY DATA RELATED TO STUDENT LEARNING OUTCOMES ASSESSMENT USED AS PART OF THE RATIONALE FOR THE REQUESTED SENATE ACTION.**

None

5. **HOW WILL THIS EFFECT TRANSFER STUDENTS:**

No effect

6. **ANTICIPATED EFFECTIVE DATE:**

Fall 2012

7. **SUBMISSION & REVISION DATES:** PLEASE DATE ALL REVISED DOCUMENTS TO AVOID CONFUSION.

<i>First Submission</i>	<i>Updated on</i>	<i>Updated on</i>	<i>Updated on</i>
1/16/12	2/16/12		

8. **SUBMITTED BY:** (contact person)

<i>Name</i>	<i>Department</i>	<i>Phone</i>	<i>Email</i>
James M. Haynes	Environmental Science & Biology	5783	jhaynes@brockport.edu

9. **COMMITTEES TO COPY:** (Senate office use only)

<b>Standing Committee</b>	<b>Forwarded To</b>	<b>Dates Forwarded</b>
<input type="checkbox"/> Executive Committee	Standing Committee	2/17/12
<input type="checkbox"/> Enrollment Planning & Policies	Executive Committee	
<input type="checkbox"/> Faculty & Professional Staff Policies	Passed GED's to Vice Provost	
<input type="checkbox"/> General Education & Curriculum Policies	Senate	2/27/12
<input type="checkbox"/> Graduate Curriculum & Policies	College President	
<input type="checkbox"/> Student Policies	OTHER	
<input checked="" type="checkbox"/> Undergraduate Curriculum & Policies	REJECTED -WITHDRAWN	

NOTES:

Updated from 1/16/12

2. Elective courses in the Aquatic Track of the Environmental Science major. The 38-credit core curriculum remains unchanged.

<b>Change</b>	<b>Old Program Course</b>	<b>Credits</b>	<b>New Program Course</b>	<b>Credits</b>
N	Core Curriculum (all majors)	38	Core Curriculum (all majors)	38
Y	ENV 427/527 Animal Behavior	3	Canceled	
Y	ENV 476/576 Animal Eco-physiology	3	Canceled	
Y	ENV 488/588 Environmental Impact Analysis	4	Canceled	
Y	ENV 464/564 Aquaculture	4	ENV 464/564 Aquaculture	3
Y			ENV 4xx/5xx Great Lakes	3
Y			Only one of Conservation Biology and Restoration Ecology may be applied to the minimum 20 credits required for the track:	
	ENV 439/539 Conservation Biology	3	ENV 439/539 Conservation Biology	3
	ENV 448/548 Restoration Ecology	3	ENV 448/548 Restoration Ecology	3
N	ENV 457 Marine Biology-Bahamas	3	ENV 457 Marine Biology-Bahamas	3
N	ENV 319 Biological Oceanography	3	ENV 319 Biological Oceanography	3
N	ENV 437 Biostatistics	3	ENV 437 Biostatistics	3
N	ENV 435 Northern Wetlands	3	ENV 435 Northern Wetlands	3
N	ENV 446 Wetland Ecology	3	ENV 446 Wetland Ecology	3
N	ENV 484/584 Fisheries Science & Management	3	ENV 484/584 Fisheries Science & Management	3
N	ESC 412/512 Hydrology	4	ESC 412/512 Hydrology	4
N	ESC 418/518 Watershed Sciences	3	ESC 418/518 Watershed Sciences	3
N	GEL 462/562 Groundwater	4	GEL 462/562 Groundwater	4
N			Maximum of 3 credits of Environmental Internship, Collaborative Research, and Independent Study may be applied to the minimum 20 credits required for the track:	
	ENV 497 Environmental Internship	1-3	ENV 497 Environmental Internship	1-3
	ENV 498 Collaborative Research	1-3	ENV 498 Collaborative Research	1-3
	ENV 499 Independent Study	1-3	ENV 499 Independent Study	1-3

3. Brief rationale for changes.

The purpose of this proposal is to ensure that the majority of free elective course credits in the

Aquatic Track of the Environmental Science major (7-8 credits minimum) are purely aquatic courses.

Due to changes in teaching assignments (Animal Ecophysiology, Rinchard; Animal Behavior, Rinchard; and Environmental Impact Analysis, Haynes) and low enrollments (Animal Ecophysiology, Environmental Impact Analysis), the department will no longer teach ENV 476/576, 427/527 and 488/588.

To diversify course offerings and increase enrollments, Dr. Rinchard will change ENV 464/564, Aquaculture, from 4 to 3 credits, and offer it every other even spring. He will begin teaching a new course, Great Lakes Issues (focusing on toxic substances and areas of concern, invasive species, nearshore health and nonpoint source pollution, habitat and wildlife destruction and degradation, alteration of natural lake level, action plan to monitor, assess and protect the overall health of the Great Lakes ecosystem), and offer it every other odd spring.

Conservation Biology and Restoration Ecology include aquatic and terrestrial topics. To maintain the aquatic focus of the track, students will be allowed to apply only one of the two courses toward the minimum of 20 credits required to complete the Aquatic Track.

4. Description of new courses (course registration form appended).

**Great Lakes Science, ENV 466:** Introduction to the major environmental issues facing the Great Lakes. Topics include an overview of the physical, chemical and biological components of the Great Lakes ecosystem, toxic substances and areas of concern, invasive species, nearshore health and nonpoint source pollution, habitat and wildlife destruction and degradation, alteration of natural lake levels, and action plans to monitor, assess and protect the overall health of the Great Lakes ecosystem (GLRI, LaMPs).

**Great Lakes Science, ENV 566:** In-depth study of the major environmental issues facing the Great Lakes. Topics include an overview of the physical, chemical and biological components of the Great Lakes ecosystem, toxic substances and areas of concern, invasive species, nearshore health and nonpoint source pollution, habitat and wildlife destruction and degradation, alteration of natural lake levels, and action plans to monitor, assess and protect the overall health of the Great Lakes ecosystem (GLRI, LaMPs).

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 Department, the chairman of ESB drafted this document. Therefore, he approves its contents, and a separate letter is not needed.

b. Approval by Dr. Jose Maliekal, Interim Dean, School of Science&Math

----- Original message -----

>Date: Tue, 24 Jan 2012 15:14:21 -0500  
>From: "Maliekal, Jose" <jmalieka@brockport.edu>  
>Subject: RE: Proposed changes in the Aquatic track in ENV  
>To: "Haynes, James" <jhaynes@brockport.edu>  
>  
>Jim,

>  
> I have reviewed the proposal that the Department of Environmental Science and  
Biology is planning to submit to the College Senate, seeking that body's  
approval to change the Aquatic track of the Environmental Science major. Based  
on that review, I approve the proposed changes.  
>  
>Jose Maliekal  
>

## 8. Appendix: Course Registration Forms—ENV 466/566, Great Lakes Issues

**College Course Registration Form**

This form is used to register all courses. It must be signed by the department chair and the school dean who will send it forward to the Registrar's Office. Registration of General Education courses requires an additional *Supplemental Course Registration Form* and the appropriate *Student Learning Outcomes Checklist*. Approval by the Faculty Senate's General Education Committee is necessary for all General Education courses.

Data entry fields are shaded. Some fields have limits on numbers and spaces that can be entered. Some areas have drop-down menus with options that can be selected by clicking your choice. Save the blank form before using it and then save each course form with an individual file name. Go back to the saved blank for each new form but save with a different name after filling in data.

Action concerns a new course      Discipline: ENV      Number: 466  
 Action concerns an existing course:      Discipline:      Number:     

Course Submitted by: Jacques Richard  
 Department: PSB

Chairperson's Approval: \_\_\_\_\_ Date: 1/16/12

Dean's Approval: \_\_\_\_\_ Date: \_\_\_\_\_

1. Action requested:
- Registration of new course
  - Revision of content for existing course
  - Registration of general course listing under which related titles can be taught (umbrella courses)
  - Registration of topics course for specific semester (if checked, complete item 2 below)
  - Change of course title – Previous Title:
  - Inactivation of existing course registration (course will not be taught in near future)
  - Other – Describe: Banner update

2. Complete for registration of topics courses or umbrella courses:
1. General course registration:      Discipline:      Number: \_\_\_\_\_
  - a. General registration title: \_\_\_\_\_
  - b. Specific course title for semester offered (topics course title): \_\_\_\_\_
  - d. Topics course registration is for: SPRING SEMESTER      Year: \_\_\_\_\_
2. Undergraduate listing:      Discipline: ENV      Number: 466
  - a.  Graduate listing:      Discipline: ENV      Number: 566
3. Official course title: GREAT LAKES ISSUES
  - a. Course start date: SPRING SEMESTER      YEAR: 2013
5. Abbreviated course title (restricted to 16 spaces): GREAT LAKE ISSU
6. a. Semester hours of credit assigned to course (variable):      3
  - b. Can this course have variable credit?  No  Yes - Credit range to semester hours
  - c. Is this course is repeatable for multiple credits?  No  Yes - Credit Maximum = \_\_\_\_\_
7. Type of Course: LIBERAL ARTS
8. General Education Information: (complete only for General Education courses)
- a. General Education Knowledge Area (choose one if applicable):      NONE

b. Additional student learning outcomes: (check all codes that are currently approved)

- Contemporary Issues (I)       Upper Level Writing (U)
- Both Contemporary Issues and Upper Level Writing (I)
- Scholarship on Women (W)       Diversity (D)
- Science & Technology (T)       Other World Civilizations (Non-Western) (O)

9. If cross-listed in another discipline(s), give discipline(s)/number(s):

If there are pre-requisites that are enforced, give discipline(s)/number(s): ENV 303

If there are co-requisites, give discipline(s)/number(s):

10. a. Approximate total number of stats/semester expected: 16
- b. How many sections do you expect to offer per semester: 1

11. Sections of this course are (check one): taught by one instructor  taught by a team

12. Planned frequency of offering:      EVERY OTHER YEAR

13. Grading (check any that apply):

- Letter grade       Pass/Fail (S/U) ONLY       Approved for IP grade
- Course requires a minimum grade of \_\_\_\_\_ for General Education or the major

14. If this course requires any special scheduling arrangements with regard to time or room/space, please comment on this in the space provided:  
 NA

15. If this course is required for any degrees/programs, please list them below:  
 NA

16. Write a brief course description for the College Catalogs. Reflect content as accurately as possible using 65 words or less (about 500 characters). Use action verbs and omit "This course covers..." and similar phrases.  
 Introduction to the major environmental issues facing the Great Lakes. Topics include an overview of the physical, chemical and biological components of the Great Lakes ecosystem, toxic substances and areas of concern, invasive species, nearshore health and nonpoint source pollution, habitat and wildlife destruction and degradation, alteration of natural lake levels, and action plans to monitor, assess and protect the overall health of the Great Lakes ecosystem (GRLI, LAMPs).

17. For all courses, please attach the following information:

- (a) a list of major course objectives
- (b) a topical outline of course
- (c) a list of methods used to evaluate student performance
- (d) a list of instructional materials used – give bibliographic citations of texts, critical readings, films, e
- (e) a current course syllabus, if possible
- (f) a brief statement detailing the additional work required of graduate students in a “swing course.”

For General Education courses only, attach also:

- (g) *Supplemental General Education Course Registration Form*
- (h) *Student Learning Outcomes Checklist (for specific rules requests).*

#### ENV 466/566, Great Lakes Issues

##### 16. Course description:

**466:** Introduction to the major environmental issues facing the Great Lakes. Topics include an overview of the physical, chemical and biological components of the Great Lakes ecosystem, toxic substances and areas of concern, invasive species, nearshore health and nonpoint source pollution, habitat and wildlife destruction and degradation, alteration of natural lake levels, and action plans to monitor, assess and protect the overall health of the Great Lakes ecosystem (GLRI, LAMPs).

**566:** In-depth study of the major environmental issues facing the Great Lakes. Topics include an overview of the physical, chemical and biological components of the Great Lakes ecosystem, toxic substances and areas of concern, invasive species, nearshore health and nonpoint source pollution, habitat and wildlife destruction and degradation, alteration of natural lake levels, and action plans to monitor, assess and protect the overall health of the Great Lakes ecosystem (GLRI, LAMPs).

17.

##### Objectives:

1. To understand the physical, chemical and biological components of the Great Lakes ecosystem
2. To understand the inherent complexity of the Great Lakes ecosystem
3. To recognize and become familiar with critical environmental issues facing the Great Lakes
4. To understand the relationship and impacts of economics, ethics and policy on solving Great Lakes environmental issues
5. To develop the ability to think critically and ask testable questions about the Great Lakes ecosystem
6. To develop improved scientific writing skills, and **lead the analysis of a research paper?**

##### Outline of course:

1. Introduction to the Great Lakes (physical, chemical and biological components)
2. Toxic substances and areas of concern
3. Invasive species and their impacts
4. Nearshore health and non point source pollution
5. Habitat and wildlife destruction and degradation
6. Alteration of natural water lake levels its impact
7. Actions to monitor, assess and protect the overall health of the Great Lakes Ecosystems (GLRI, LAMPs)

##### Methods of assessing student performance:

1. Three exams (two during the semester and one final)
2. One term paper
3. Two to three research article presentations and discussions

##### Materials:

Texts used in the class are:

- Dempsey, D., 2004. *On the Brink: The Great Lakes in the 21st Century*. Michigan State University Press
- Grady, W., 2011. *The Great Lakes: the Natural History of a Changing Region*. GreyStone Books
- Ashworth, W., 1987. *The Lake, Great Lakes: An Environmental History*. Wayne State University Press
- Annm, P. 2006. *The Great Lakes Water Wars*. Island Press

##### Additional work required of graduate students:

1. Additional readings and projects on critical Great Lakes environmental issues
2. More rigorous evaluation of performance on lecture examinations