

4-6-2009

## Revision to the Meteorology Major

The College at Brockport, College Senate

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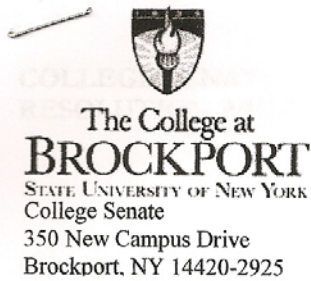
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RECEIVED  
APR 10 2009  
The College at Brockport  
Office of the President

Resolution # 23  
2008-2009  
College Senate

New Resolution:   
Supersedes Res #:

TO: Dr. John R. Halstead, College President

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

- RE:  $\longrightarrow$
- 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: **Revision to Meteorology Major** (*routing#40 08-09 UC*)

Signed: *T. M. Rao* Date: *4/9/09*  
*(Thambrahall 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:  $\longrightarrow$
- 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: *John R. Halstead* Date: *4/24/09*  
*(Dr. John R. Halstead, President, SUNY College at Brockport)*

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DEAN(S) COPY: Department Chair(s), Other: \_\_\_\_\_

COLLEGE SENATE COPIES: Originator, College Senate Website, Other: \_\_\_\_\_

**COLLEGE SENATE OFFICE  
RESOLUTION PROPOSAL COVER PAGE**

<b>Routing Number</b> <i>Routing # assigned by Senate Office</i>	<b>#40 08-09 UC</b> <i>Use routing number and title in all reference to this proposal.</i>
<b>Replaces Resolution</b>	<b>#</b>

**DEADLINE FOR SUBMISSIONS: FEBRUARY 28**

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

**INSTRUCTIONS** – please, no multiple attachments – each proposal must be submitted electronically as one document.

- Submit only complete proposals. Include support letters from department chair and dean.
- Proposals must be prepared individually in Word format using committee guidelines available at [brockport.edu/collegesenate/proposal.html](http://brockport.edu/collegesenate/proposal.html).
- Fill out this cover page for each proposal and insert it electronically as the front page of your document. ([collegesenate/proposal.html](http://collegesenate/proposal.html))
- Email whole proposal with cover page as one attachment to [senate@brockport.edu](mailto:senate@brockport.edu) and [facpres@brockport.edu](mailto:facpres@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, ie. *Graduate Probation/Dismissal Proposal* rather than *Graduate Proposal*.

Revision to the Meteorology Major

2. **BRIEF DESCRIPTION OF PROPOSAL:**

**For submission of proposals to the Undergraduate Curriculum & Policies Committee.**

Change the Meteorology major by replacing Introduction to Oceanography with Hydrometeorology as a designated elective, adding Broadcast Meteorology to the designated elective list, requiring Environmental Climatology and Climatology Laboratory, along with requiring one semester of Weather Briefing.

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

These changes should have minimal effect on transfer students, as the required courses are taught every year.

4. **ANTICIPATED EFFECTIVE DATE:**

Fall 2009

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>
2/18/09			

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

<i>Name</i>	<i>Department</i>	<i>Phone</i>	<i>Email</i>
Scott Rochette	Earth Sciences	2603	rochette@esc.brockport.edu

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

<b>Standing Committee</b>	<b>Forwarded For Approval To</b>	<b>Dates</b>
<input type="checkbox"/> Enrollment Planning & Policies	Committee for approval	2/18/09
<input type="checkbox"/> Faculty & Professional Staff Policies	Executive Committee	3/9/09
<input type="checkbox"/> General Education & Curriculum Policies *	GED to Vice Provost	
<input type="checkbox"/> Graduate Curriculum & Policies	Senate	3/23/09
<input type="checkbox"/> Student Policies	College President	4/9/09
<input checked="" type="checkbox"/> Undergraduate Curriculum & Policies	OTHER	
<i>* follow special Gen Ed procedures for submission of General Education proposals at "How to Submit Proposals" on our Website.</i>		
REJECTED -WITHDRAWN		

NOTES:

## Executive Summary

The meteorology major was created to prepare students for careers as meteorologists in private companies, media outlets, the military, and government agencies, or for graduate study. The curriculum was designed to fit the standards set by the U.S. Office of Personnel Management (OPM) and the American Meteorological Society (AMS). While there is no official accreditation for meteorology programs, a meteorologist hired for Federal service must have completed a program that matches the GS 1340 qualification standards. As such, we have designed our program to meet these requirements while giving students some flexibility toward meeting career goals. While we have achieved significant success in seeing graduates employed in their chosen field or accepted into prestigious graduate programs, we would like to bolster the viability of our graduates via the proposed changes. While the number of credits required for the meteorology program will increase by one, the changes will not require restructuring of our course offerings timetable.

## Proposed Changes

### **1. Require Environmental Climatology and Climatology Laboratory (ESC 313/314) for all meteorology students.**

Presently, meteorology students have a choice to take Environmental Climatology (ESC 313) and Climatology Lab (ESC 314) or Hydrology (ESC 412) as a requirement. In this day and age, it is unconscionable to let a student graduate from any meteorology program without at least some coursework in climate studies. Climate change and global warming are extremely serious issues, and our students need to understand the scientific basis for these issues. Encouraging the students to complete this sequence in their freshman year would give students a stronger background in meteorology before enrolling in Synoptic Meteorology I (ESC 311), typically taken in the fall of the sophomore year. It would also provide first-year students with an additional lab experience before starting the Synoptic Meteorology sequence. Hydrology (ESC 412) as a designated elective remains an option for interested students.

### **2. Require meteorology students to take (at least) one semester of Weather Briefing (ESC 490).**

Real-time diagnosis and prediction of atmospheric behavior are major components of meteorology. Requiring junior- and senior-level students to enroll in Weather Briefing, a one-credit lab-format course, will continue their exposure to such activities, as they are required to prepare extended diagnostic and prognostic discussions, similar to but longer than those performed in the lab section of Synoptic Meteorology II. They also gain experience in professional public speaking. In addition, there are periodic exercises in composing different types of forecast discussions, thereby providing them with experience in professional/technical writing. Students may repeat the course once as a designated elective.

### **3. Replace Introduction to Oceanography (ESC 200) on the list of designated electives with Hydrometeorology (ESC 462), and add Broadcast Meteorology (ESC 427) as a designated elective.**

Meteorology majors take six credits of designated electives. Introduction to Oceanography (ESC 200) is an introductory course that does not include sufficient technical content to serve the intent of a designated elective. Students interested in the role of water in meteorology would be able to take Hydrology (ESC 412) and/or Hydrometeorology (ESC 462) as a designated elective. Students interested in media careers can take Broadcast Meteorology (ESC 327).

## Side by Side Comparison

### Current Requirements

REQUIRED MAJOR COURSES	Credits
ESC 211 Introduction to Meteorology	4
ESC 311 Synoptic Meteorology I	4
ESC 312 Synoptic Meteorology II	4
<i>ESC 313-314 Environmental Climatology &amp; Climatology Lab</i> <b>OR</b> <i>ESC 412 Hydrology</i>	<b>4</b>
ESC 350 Computational Methods in the Field Sciences	3
ESC 351 Lab Experience in Scientific Programming	1
ESC 391 Writing in the Earth Sciences	1
ESC 415 Physical Meteorology	3
ESC 416 Thermodynamics and the Boundary Layer	3
ESC 417 Dynamic Meteorology	3
ESC 420 Atmospheric Sensing Methods	4
ESC 493 Seminar on Earth Sciences Problems	2
Designated electives by advisement	6
TOTAL	42
<b>REQUIRED CO-REQUISITE COURSES</b>	
CHM 205 College Chemistry I	4
MTH 201-202 Calculus I & II	8
MTH 255 Differential Equations	3
PHS 201-202 College Physics I & II	8
TOTAL	23
<b>DESIGNATED ELECTIVES</b>	
<i>ESC 200 Introduction to Oceanography</i>	<b>3</b>
<i>ESC 313 Environmental Climatology</i>	<b>3</b>
<i>ESC 314 Climatology Lab</i>	<b>1</b>
ESC 412 Hydrology	4
ESC 421 Air Pollution Meteorology	3
ESC 432 Tropical Meteorology	3
ESC 452 Mesoscale Meteorology	3
ESC 460 Meteorological Internship	1-3
ESC 490 Weather Briefing	1
ESC 399/499 Independent Study	1-3

### Proposed Requirements

REQUIRED MAJOR COURSES	Credits
ESC 211 Introduction to Meteorology	4
ESC 311 Synoptic Meteorology I	4
ESC 312 Synoptic Meteorology II	4
<i>ESC 313-314 Environmental Climatology &amp; Climatology Lab</i>	<b>4</b>
ESC 350 Computational Methods in the Field Sciences	3
ESC 351 Lab Experience in Scientific Programming	1
ESC 391 Writing in the Earth Sciences	1
ESC 415 Physical Meteorology	3
ESC 416 Thermodynamics and the Boundary Layer	3
ESC 417 Dynamic Meteorology	3
ESC 420 Atmospheric Sensing Methods	4
<i>ESC 490 Weather Briefing</i>	<b>1</b>
ESC 493 Seminar on Earth Sciences Problems	2
Designated electives by advisement	6
TOTAL	43
<b>REQUIRED CO-REQUISITE COURSES</b>	
CHM 205 College Chemistry I	4
MTH 201-202 Calculus I & II	8
MTH 255 Differential Equations	3
PHS 201-202 College Physics I & II	8
TOTAL	23
<b>DESIGNATED ELECTIVES</b>	
<i>ESC 327 Broadcast Meteorology</i>	<b>3</b>
ESC 412 Hydrology	4
ESC 421 Air Pollution Meteorology	3
ESC 432 Tropical Meteorology	3
ESC 452 Mesoscale Meteorology	3
ESC 460 Meteorological Internship	1-3
<i>ESC 462 Hydrometeorology</i>	<b>4</b>
ESC 490 Weather Briefing (can be taken for repeat credit)	1
ESC 399/499 Independent Study	1-3



**SUNY BROCKPORT**  
Department of the Earth Sciences

**TO:** T. M. Raso, President  
College Senate

**FROM:** Mark Noll, Chair  
Department of the Earth Sciences

**DATE:** February 3, 2009

**SUBJECT:** MET CURRICULUM CHANGE PROPOSAL

I am writing in support of the attached proposal that recommends several changes to our Meteorology major curriculum. These changes not only coincide with the employment requirements of the National Weather Service and the recommendations of the American Meteorological Society, but also provide our graduates with a more diverse education, which in turn allows for broader career opportunities.

As relayed in our department's mission statement, it is our obligation to actively pursue avenues that would improve the quality and applicability of the education provided to our students. By making the changes proposed, we are making good on that promise.

Please contact me with any questions you may have.

MRN/lak

Attachment(s)

I endorse the attached proposal.

Stuart Appelle, Ph.D.

Dean, School of Letters and Sciences

350 New Campus Drive

The College at Brockport

State University of New York

Brockport, New York 14420

**From:** Karen Kifer [mailto:kkifer@brockport.edu]

**Sent:** Tuesday, February 10, 2009 12:29 PM

**To:** Appelle, Stuart

**Subject:** [Fwd: MET PROPOSAL]

----- Original Message -----

**Subject:**MET PROPOSAL

**Date:**Tue, 10 Feb 2009 11:46:03 -0500

**From:**Lauri Kifer <[lauri.kifer@brockport.edu](mailto:lauri.kifer@brockport.edu)>

**Reply-To:**[lauri.kifer@brockport.edu](mailto:lauri.kifer@brockport.edu)

**Organization:**The College at Brockport

**To:**Karen Kifer <[kkifer@brockport.edu](mailto:kkifer@brockport.edu)>

Here's an electronic copy of the proposal with Mark's letter.

--

Lauri Kifer, Secretary  
Department of the Earth Sciences  
The College at Brockport  
350 New Campus Drive  
317 Lennon Hall  
Brockport, NY 14420  
(585) 395-2636