Resolution #33 2013-2014
College Senate

Supersedes Res #: ____________

TO: Dr. John R. Halstead, College President
FROM: The College Senate: 4/21/2014

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

SUBJ: Proposal to Revise the Meteorology Minor (92-13-14 UC)

Signed: Dawn M. Jones  Date: 4/28/14
(Dawn Jones, 2013-14 College Senate President)

TO: Dawn Jones, 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 2014
   **Implementation of resolution requires final approval from SUNY State Education Department. YES ☐ ☐ NO ☐
   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 _____/_____/_____  

   Signed:   Date: 4/29/14
(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.

INSTRUCTIONS
- Use committee guidelines available at 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 if applicable.
- Locate the Resolution # and date this proposal will replace at our “Approved Resolutions” page on our Web site.
- Email completed proposal to senate@brockport.edu. (General Education Proposals and questions go to dlamphro@brockport.edu in the Vice Provost’s Office first.)
- Make revisions on the paperwork emailed to you from the Senate office that shows the assigned routing number on top. Submit updated document to senate@brockport.edu.
- Questions? Call the Senate office at 395-2586 or the appropriate committee chairperson.

1. PROPOSAL TITLE: Please be somewhat descriptive, ie. Use a course number and/or title, indicate if for GED code, etc. Proposal to Revise the Meteorology Major

2. BRIEF DESCRIPTION OF PROPOSAL: The proposed changes will update the major to incorporate recommendations from the American Meteorological Society to incorporate advanced skills

3. WILL ADDITIONAL RESOURCES AFFECTING BUDGET BE NEEDED?  _X_ 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.
   Students in our capstone course sequence could better meet expectations with more advanced skills in meteorological analysis using advanced techniques that are becoming industry standards.

5. HOW WILL THIS AFFECT TRANSFER STUDENTS: No impact

6. ANTICIPATED EFFECTIVE DATE: Fall 2014

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

8. SUBMITTED BY: (contact person)

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<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Phone</th>
<th>Email</th>
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<tbody>
<tr>
<td>Mark Noll</td>
<td>Earth Science</td>
<td>x-5717</td>
<td><a href="mailto:mnoll@brockport.edu">mnoll@brockport.edu</a></td>
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9. COMMITTEES: (Senate office use only)

<table>
<thead>
<tr>
<th>Standing Committee</th>
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<tr>
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<td>Executive Committee</td>
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<td>College President</td>
<td>4/29/14</td>
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<tr>
<td>__ Student Policies</td>
<td>OTHER</td>
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REJECTED - WITHDRAWN
Proposal to Revise the Meteorology Major

Rationale
In 2010, the American Meteorological Society adopted new guidelines for a bachelor’s degree. In these guidelines, they identify several things, particularly for those students wishing to continue in graduate school. While our current curriculum meets these guidelines, there is one area in which we feel we need to improve based on our own internal assessment of learning outcomes and newer expectations of the discipline. While weather forecasting is at the heart of meteorological work, a greater emphasis is being placed on developing those skills in light of advanced techniques, including the use of deeper knowledge gained in upper division courses and new numerical tools. Our current curriculum requires students to take one semester of ESC 490 Weather Briefing, a course that focuses on forecasting alone. At present, we do not feel that this is sufficient.

The proposed changes to the curriculum seek to provide more experience in meteorological analysis across the curriculum, with special attention to applying knowledge and skills gained in upper level courses that come after their introduction to forecasting during their sophomore year. The two new courses, ESC 390 Intermediate Meteorological Analyses and ESC 490 Advanced Meteorological Analyses, will replace the old ESC 490 Weather Briefing. These new courses will emphasize the development of new skills and use of advanced tools such as numerical weather prediction and ensemble forecasting. All of these courses are 1 credit laboratory courses.

New Courses
Two new courses will be introduced, replacing one current course.

Staffing
No new staffing is required to support this change.

Resources
No additional resources are needed to support this change.
Old Requirements

I. Core courses (36 cr.)

ESC 211 Introduction to Meteorology
ESC 311 Synoptic Meteorology I
ESC 312 Synoptic Meteorology II
ESC 313-314 Environmental Climatology and Lab
ESC 350 Computational Methods
ESC 391 Writing in the Earth Sciences
ESC 415 Physical Meteorology
ESC 416 Thermodynamics & Boundary Layer
ESC 417 Dynamic Meteorology
ESC 420 Radar & Satellite Meteorology
ESC 490 Weather Briefing (1)
ESC 494 Senior Research
ESC 495 Senior Seminar

Designated electives by advisement (6 cr)

Required corequisite courses (26 cr.)

MTH 201-202 Calculus I, II
MTH 255 Differential Equations
PHS 235-240 Physics I, II
CHM 205 Chemistry I
CPS 201 Computational Tools I

Designated electives

ESC 300 Physical Oceanography
ESC 412 Hydrology
ESC 331 Air & Water Pollution Meteorology
ESC 432 Tropical Meteorology
ESC 452 Mesoscale Meteorology
ESC 460 Meteorological Internship
ESC 462 Hydrometeorology
ESC 477 Storm Chasing
ESC 399/499 Independent Study

Total Credits 68

Proposed Requirements

II. Core courses (37 cr.)

ESC 211 Introduction to Meteorology
ESC 311 Synoptic Meteorology I
ESC 312 Synoptic Meteorology II
ESC 313-314 Environmental Climatology and Lab
ESC 350 Computational Methods
ESC 390 Intermediate Meteorological Analysis (1)
ESC 391 Writing in the Earth Sciences
ESC 415 Physical Meteorology
ESC 416 Thermodynamics & Boundary Layer
ESC 417 Dynamic Meteorology
ESC 420 Radar & Satellite Meteorology
ESC 490 Advanced Meteorological Analysis (1)
ESC 494 Senior Research
ESC 495 Senior Seminar

Designated electives by advisement (5 cr)

Required corequisite courses (26 cr.)

MTH 201-202 Calculus I, II
MTH 255 Differential Equations
PHS 235-240 Physics I, II
CHM 205 Chemistry I
CPS 201 Computational Tools I

Designated electives

ESC 300 Physical Oceanography
ESC 412 Hydrology
ESC 331 Air & Water Pollution Meteorology
ESC 432 Tropical Meteorology
ESC 452 Mesoscale Meteorology
ESC 460 Meteorological Internship
ESC 462 Hydrometeorology
ESC 477 Storm Chasing
ESC 399/499 Independent Study

Total Credits 68

ESC 460, 399 and 499 are for variable credit
28 February 2014

Mark Noll
Department of the Earth Sciences

Dear Mark,

I am writing to express my support to the curricular changes proposed by the Department of the Earth Sciences to the Meteorology major to enable students acquire advanced knowledge and skills in such topics as numerical weather prediction and ensemble forecasting.

Sincerely,

[Signature]

Jose A. Maliekal
Dean
To: College Senate

From: James Zollweg, Chair of Earth Sciences

Re: Minor modification to Meteorology major

On behalf of the Earth Sciences department, I fully support the proposed change to the Meteorology major. This change will bring the credentials of our graduates to a higher level with respect to the professional qualifications required for employment in the field. Additionally, it will facilitate a stronger sense of community among majors by providing a common experience among all 2nd through 4th year students. It will require no additional resources.