Resolution #30 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: Change in Prerequisite for MTH 425 and MTH 457 (36_13-14UC)

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

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

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 ___/___/___
   b. Comments: ____________________________ Date: 4/28/14
(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.
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, i.e. Use a course number and/or title, indicate if for GED code, etc.
   A change in the prerequisite for MTH 425 (Modern Algebra) and MTH 457 (Real Analysis)

2. BRIEF DESCRIPTION OF PROPOSAL:
   A proposal that the prerequisite for both Modern Algebra (MTH 425) and Real Analysis (MTH 457) be changed to a passing grade in Calculus III (MTH 203) and a grade of at least “C” in Linear Algebra (MTH 324).

3. 4. WILL ADDITIONAL RESOURCES AFFECTING BUDGET BE NEEDED? __ X__ NO __ YES EXPLAIN YES

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

6. HOW WILL THIS AFFECT TRANSFER STUDENTS:
   A transfer student with lower than a “C” in Linear Algebra would have to earn at least a “C” in MTH 324 before taking MTH 425 or MTH 457. At the discretion of the Mathematics Department Chair, credit by examination may be an acceptable alternative for transfers.

6. ANTICIPATED EFFECTIVE DATE:
   Fall 2014

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

<table>
<thead>
<tr>
<th>First Submission</th>
<th>Updated on</th>
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8. SUBMITTED BY: (contact person)

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Phone</th>
<th>Email</th>
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<tbody>
<tr>
<td>Rebecca Smith</td>
<td>Mathematics</td>
<td>395-5183 (office)</td>
<td><a href="mailto:rsmith@brockport.edu">rsmith@brockport.edu</a></td>
</tr>
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<td>395-2036 (Math Dept)</td>
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9. COMMITTEES: (Senate office use only)

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<thead>
<tr>
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<th>Dates Forwarded</th>
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<tr>
<td>Executive Committee</td>
<td>Standing Committee</td>
<td>02/27/2014</td>
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<tr>
<td>Enrollment Planning &amp; Policies</td>
<td>Executive Committee</td>
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<td>Faculty &amp; Professional Staff Policies</td>
<td>Senate</td>
<td>4/7/14, 4/21/14</td>
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<td>General Education &amp; Curriculum Policies</td>
<td>Passed GED's go to Vice Provost</td>
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<td>Graduate Curriculum &amp; Policies</td>
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<td>Student Policies</td>
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<tr>
<td>Undergraduate Curriculum &amp; Policies</td>
<td>REJECTED -WITHDRAWN</td>
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The Department of Mathematics proposes that the prerequisite for both Modern Algebra (MIH425) and Real Analysis (MIH457) be changed to a grade of at least a “C” in the existing prerequisite course Linear Algebra (MIH324) and keep the current prerequisite of a passing grade in Calculus III (MIH203).

This proposal concerns the skill level and body of knowledge necessary to have a reasonable expectation of success in MIH425 and MIH457. The proof and problem solving techniques covered in Linear Algebra are essential for both MIH425 and MIH457. Additionally, both MIH425 and MIH457 are requirements for only math majors, as is a minimum grade of “C” in MIH324. Therefore, this is only potentially a change in the order in which students would complete these requirements.

A transfer student will have met the proposed prerequisite for MIH425 and MIH457 if they have earned a grade of at least “C” or the equivalent in a course for which they are to be awarded credit for MIH324 and a passing grade in MIH203. Note that in the consideration of whether a transfer student shall be awarded credit for MIH425 and/or MIH457, their grade in MIH324 is not relevant under this proposal.

Side-by-side comparison of the old and new program

<table>
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<tr>
<th>Current prerequisite for both MIH425 and MIH457:</th>
<th>Proposed prerequisite for both MIH425 and MIH457:</th>
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<tr>
<td>A passing grade in MIH324 and MIH203</td>
<td>A grade of “C” or better in MIH324 and a passing grade in MIH203</td>
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A brief rationale for changes

It has been our experience that students who pass Linear Algebra with a grade of less than C tend to perform poorly in Modern Algebra and Real Analysis. This observation points to a possible inaccuracy in the prerequisite designation for Modern Algebra and Real Analysis. Because our goal is that our students be successful in all of our classes, we hope to take this small step to remedy the situation.

Since students are already required to obtain a “C” in Linear Algebra for the major, this only potentially changes when a student who passed, but did not get the necessary grade might retake Linear Algebra to achieve this grade. Furthermore, students in this situation are more likely to be successful on their first attempt at Modern Algebra and/or Real Analysis if they have a better understanding of this prerequisite material.

Additionally, the students who do understand the prerequisite material are better served in Modern Algebra and Real Analysis if the time can be devoted to new material rather than remedial lessons for the underprepared students. Furthermore, this requirement falls in line with our department guidelines for student evaluation.
We note that SUNY Geneseo, Nazareth, and St. John Fischer all require a “C” or “C-“ in all prerequisite courses for Modern Algebra and Real Analysis.

We conclude that it is appropriate to make the proposed change in the prerequisite for MTH 425 and MTH 457.

**Description of any new courses**

This proposal does not include the addition of any new courses.

**Staffing issues**

As all students who would be required to take MTH 425 and MTH 457 are math majors who are also required to earn at least a “C” in MTH 324, there should be no staffing issues.

**Academic administration commentary**

Please see attached letter of support from the Chair of the Department of Mathematics and from the Dean of the School of Science and Mathematics.

**Resources, facilities that may be needed to implement the program**

None

*If appropriate, letters of support from cooperating or affected agencies, ITS, library or other units/departments that may be involved.*

As we have pointed out above, there is no impact on other departments.
Dear Rebecca,

I am in complete agreement with you and the recommendation of the Math Department Undergraduate Committee that a grade of "C" or better in MTH 324 and a passing grade in MTH 203 be requirements for a student to enroll in both MTH 425 and MTH 457. My experience has been that students not meeting this new requirement inevitably fail the senior 400 level courses.

The proposed change has my complete support.

Sandy

Dr. Sanford Miller
SUNY Distinguished Professor of Mathematics
Chair, Department of Mathematics

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Rebecca,

I am in support of the proposal that the Department of Mathematics is submitting to the College Senate to change the pre-requisite for MTH 425 (Modern Algebra) and MTH 457 (Real Analysis) from the combination of a passing grade in MTH 324 (Linear Algebra) and MTH 203 (Calculus III) to the combination of a grade of "c" or better in MTH 324 and a passing grade in MTH 203.

Sincerely,

Jose Maliekal, PhD
Dean, School of Science and Mathematics
Phone: (585) 395 - 2394