4-19-2010

Grade Requirement for Core Courses in the Math Major

The College at Brockport, College Senate

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TO: Dr. John R. Halstead, College President
FROM: The College Senate: April 19, 2010
RE: I. Formal Resolution (Act of Determination)
II. Recommendation (Urging the Fitness of)
III. Other, For Your Information (Notice, Request, Report, etc.)
SUBJ: Grade Requirement for Core Courses in the Math Major

Signed: ___________________________ Date: ___/___/____
(Steven Lewis, 2009-10 College Senate President)

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

TO: Steven Lewis, The 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 2010
   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: ___________________________ Date: ___/___/____

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.
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.
- Fill out this cover page for each proposal and insert it electronically as the front page of your document. (/collegesenate/proposal.html)
- Email whole proposal with cover page as one document 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, i.e. Graduate Probation/Dismissal Proposal rather than Graduate Proposal.

| Grade Requirement for Core Courses in the Math Major |

2. BRIEF DESCRIPTION OF PROPOSAL:

This is a proposal that the requirements for the math major be changed to require a grade of at least “C” for the courses MTH 201, 202, 281, and 324

3. WILL ADDITIONAL RESOURCES AFFECTING BUDGET ARE NEEDED? _X_ NO ___ YES EXPLAIN YES

4. HOW WILL THIS AFFECT TRANSFER STUDENTS:

A transfer student with a lower grade would be required to repeat the courses.

5. ANTICIPATED EFFECTIVE DATE:

Fall 2010

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

<table>
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<th>Updated on</th>
<th>Updated on</th>
<th>Updated on</th>
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<tr>
<td>2/26/10</td>
<td>3/31/10</td>
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<td></td>
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</tbody>
</table>

7. SUBMITTED BY: (contact person)

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jason Morris</td>
<td>Mathematics</td>
<td>395-2199 (office) 395-2036 (Math Dept)</td>
<td><a href="mailto:jrmorris@brockport.edu">jrmorris@brockport.edu</a></td>
</tr>
</tbody>
</table>

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

<table>
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<th>Forwarded For Approval To</th>
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<td>Committee for approval 3/3/10, 3/31/10</td>
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<td>__ Faculty &amp; Professional Staff Policies</td>
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<td>__ General Education &amp; Curriculum Policies *</td>
<td>GED to Vice Provost</td>
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<tr>
<td><strong>Undergraduate Curriculum &amp; Policies</strong></td>
<td>OTHER</td>
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* follow special Gen Ed procedures for submission of General Education proposals at “How to Submit Proposals” on our Website.

NOTES:
The Department of Mathematics proposes to require that mathematics majors be required to earn a grade of at least “C” in the courses MTH 201, 202, 281, and 324.

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

<table>
<thead>
<tr>
<th>Current requirements:</th>
<th>Proposed requirements:</th>
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</thead>
<tbody>
<tr>
<td>Students must complete a minimum of 46 credits in mathematics and four credits in computer science, as follows:</td>
<td>Students must complete a minimum of 46 credits in mathematics and four credits in computer science, as follows:</td>
</tr>
</tbody>
</table>
| **1. Required courses (33 credits) Credits**  
MTH 201, 202, 203 Calculus I, II, III ……………….12  
MTH 255 Differential Equations………………...3  
MTH 281 Discrete Mathematics I …………………...3  
MTH 324 Linear Algebra …………………………3  
MTH 346 Probability and Statistics I ……………….3  
MTH 425 Abstract Algebra …………………………3  
MTH 457 Real Analysis ……………………………3  
MTH 432 College Geometry (a)  
**OR …………………………………………………3**  
MTH 430 Topology (a) | **1. Required courses (33 credits) Credits**  
MTH 201*, 202*, 203 Calculus I, II, III …………….12  
MTH 255 Differential Equations………………...3  
MTH 281* Discrete Mathematics I …………………..3  
MTH 324* Linear Algebra ……………………………3  
MTH 346 Probability and Statistics I ……………….3  
MTH 425 Abstract Algebra …………………………3  
MTH 457 Real Analysis ……………………………3  
MTH 432 College Geometry (a)  
**OR …………………………………………………3**  
MTH 430 Topology (a)  
2. **Elective courses (9 credits) ………………..9**  
Nine credits in mathematics, by advisement,  
from courses numbered MTH 400 or higher.  
CSC 483 may be substituted for one of these math courses.  
3. **Program corequisite (computer science course):**  
CSC 203 Fundamentals of Computer Science I ………4 ___  
……………………………………………………………..Total: 46 | 2. **Elective courses (9 credits) ………………..9**  
Nine credits in mathematics, by advisement,  
from courses numbered MTH 400 or higher.  
CSC 483 may be substituted for one of these math courses.  
3. **Program corequisite (computer science course):**  
CSC 203 Fundamentals of Computer Science I ………4 ___  
……………………………………………………………..Total: 46  
*These courses must be completed with a grade of at least C.* |

**A brief rationale for changes**

The material covered in the four courses MTH 201 (Calculus 1), MTH 202 (Calculus 2), MTH 281 (Discrete Mathematics), and MTH 324 (Linear Algebra) is fundamental to the study of mathematics. We believe that demonstrated mastery of these subjects at least the C level should be a requirement of the mathematics major.

Besides, it is our experience that performance at a lower level seriously jeopardizes a student’s chance of success with the rest of the requirements of the major. This happens in two ways at once:

- Without mastery of this fundamental material, the student is much less likely to be able to pass all of the more advanced required courses.
- Even if the student is able to pass the more advanced courses, it is unlikely that they will be able to achieve the required grade point average. To put it lightly, it is not easy to make up for a D in Calculus with a B in Real Analysis.

In fact, students usually realize on their own that low grades in these courses should be improved upon. However, with no explicit requirement in place, such students often face significant additional hurdles due to financial aid restrictions on course repetitions. It is our understanding that this proposal would remedy this situation.

**Description of any new courses**

This proposal does not include the addition of any new courses.
Staffing issues
None anticipated.

Academic administration commentary
See attached. (Commentary of the Dean is pending.)

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.
NA

From: Stuart Appelle [sappelle@brockport.edu]
Sent: Thursday, March 25, 2010 2:06 PM
To: mbarbosu@brockport.edu; 'Jason Morris'
Subject: Mathematics Proposals for College Senate
Attachments: MTH 202 prerequisite grade senate proposal revisions.doc; math major grades senate proposal 2010.doc; math minor senate proposal 2010.doc

I support your attached College Senate Proposals (1) “A change in the prerequisite for calculus 2”, (2) Graduate requirement for core courses in the math major”, and (3) “Requirement for math minor”.

Stuart Appelle, Ph.D.
Dean, School of Science and Mathematics
350 New Campus Drive
The College at Brockport
State University of New York
Brockport, New York 14420

From: Michael Barbosu [mbarbosu@brockport.edu]
Sent: Thursday, February 25, 2010 1:03 PM
To: Jason R. Morris
Cc: Edith Zsuzsics
Subject: Minimum C grade Grade Proposal

Hello Jason,
I am very glad that you will submit the proposal regarding the requirement of a minimum C grade in MTH201, MTH202, MTH281, and MTH324 for mathematics majors because this was an important issue our department had to deal with, as it was presented numerous times in our department meetings.

Over the past several years we discussed the idea of submitting such a proposal and after serious consideration and comparison to other colleges in the area, I think we have to move forward. I strongly support your proposal and I believe that it will strengthen our program.

Michael

Dr. Mihail Barbosu, Chair