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:   Requirements for the Math Minor (routing #58 09-10UC)

Signed:__________________________________________    Date: 4/20/10
(Senate Lewis, 2009-10 College Senate President)

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 _____/_____/

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.
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.
- 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, ie. Graduate Probation/Dismissal Proposal rather than Graduate Proposal.

2. BRIEF DESCRIPTION OF PROPOSAL:
This is a proposal that the requirements for the math minor be changed to specifically require certain courses and to specifically disallow certain electives.

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

4. HOW WILL THIS AFFECT TRANSFER STUDENTS:
No special effect.

5. ANTICIPATED EFFECTIVE DATE: Fall 2010

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

<table>
<thead>
<tr>
<th>First Submission</th>
<th>Updated on</th>
<th>Updated on</th>
<th>Updated on</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/26/10</td>
<td>3/31/10</td>
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</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)</td>
<td><a href="mailto:jrmorris@brockport.edu">jrmorris@brockport.edu</a></td>
</tr>
<tr>
<td></td>
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<td>395-2036 (Math Dept)</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Standing Committee</th>
<th>Forwarded For Approval To Dates</th>
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</thead>
<tbody>
<tr>
<td>__Enrollment Planning &amp; Policies</td>
<td>Committee for approval 3/3/10, 3/31/10</td>
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<tr>
<td>__Faculty &amp; Professional Staff Policies</td>
<td>Executive Committee 3/29/10</td>
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<tr>
<td>__General Education &amp; Curriculum Policies *</td>
<td>GED to Vice Provost 4/5/10, Vote 4/19/10</td>
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<tr>
<td>__Graduate Curriculum &amp; Policies</td>
<td>Senate 4/30/10</td>
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<tr>
<td>__Student Policies</td>
<td>College President OTHER</td>
</tr>
<tr>
<td>__Undergraduate Curriculum &amp; Policies</td>
<td>REJECTED -WITHDRAWN</td>
</tr>
</tbody>
</table>

* 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 the courses MTH 201, MTH 202, and MTH 281 be required of all mathematics minors, and that the remaining three courses be chosen by advisement from MTH 203, MTH 243, MTH 255, or any course numbered MTH 324 or higher. We would also like to allow an approved college-level statistics course as a substitute for the elective MTH 243. (The other statistics courses currently include ECN 204, PSH 202, SOC 200, and HLS 488.)

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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<tr>
<td>Students must complete a minimum of six courses in mathematics, as follows:</td>
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</tr>
<tr>
<td><strong>1. Required courses:</strong> MTH 201 Calculus I and MTH 202 Calculus II.</td>
<td><strong>1. Required courses:</strong> MTH 201 Calculus I, MTH 202 Calculus II, and MTH 281 Discrete Mathematics.</td>
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<tr>
<td><strong>2. Elective courses:</strong> Four courses in mathematics, chosen from MTH 203, MTH 255, MTH 243 or higher. Students must choose these electives only after consultation with their mathematics department advisor.</td>
<td><strong>2. Elective courses:</strong> Three courses in mathematics, chosen from MTH 203, MTH 243, MTH 255, or any course numbered MTH 324 or higher. Students must choose these electives only after consultation with their mathematics department advisor.</td>
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<tr>
<td><strong>Note:</strong> At least nine credits toward the minor must be completed at The College at Brockport. If a student wishes to fill some of the requirements of the minor through coursework at an institution other than The College, then the student must first obtain the approval of the department chairperson.</td>
<td><strong>Notes:</strong> 1. At least nine credits toward the minor must be completed at The College at Brockport. If a student wishes to fill some of the requirements of the minor through coursework at an institution other than The College, then the student must first obtain the approval of the department chairperson.  2. With the consent of the mathematics department advisor, the approved college-level statistics courses are acceptable as a substitute for the elective MTH 243. The other statistics courses currently include ECN 204, PSH 202, SOC 200, and HLS 488.</td>
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A brief rationale for changes

We have found that as a practical matter, MTH 281 has become a “hidden” requirement of the math minor. This is true for at least two reasons. First, advisors will almost always advise their math minors to take this course because of its fundamental nature. Second, because of prerequisites, it is nearly impossible to find enough electives that do not depend on MTH 281. (While it may be possible to do so, some of the courses are rarely offered, and the resulting program could be rather incoherent.) Therefore, we wish to introduce MTH 281 as a formal requirement for reasons of transparency.

Under the current requirements, there are courses such as MTH 313 and MTH 314 that sound as though they would be permissible electives, but which are virtually never agreed to by the advisor as part of a
coherent minor program of study in mathematics. (Although these are allowed as part of a coherent major program of study in mathematics, to include these special courses in a six course program would represent too much sacrifice in both depth and breadth.) Therefore, again for reasons of transparency, we wish to write guidelines that clearly exclude these.

Finally, we have a policy of excluding from MTH 243 those students who have taken an approved statistics course through another department. Because of this policy, it seems only fair to allow one of these courses as part of a math minor.

**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.

**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
Hello Jason,

As presented in our department meetings, the description of the Minor in Mathematics Program created confusion among some students as it does not reflect the actual status of the program. I think that the clarifications that you make in the Minor in Math Proposals will fix this and I support your proposal.

Michael

Dr. Mihail Barbosu, Chair