October 22, 2015

To: Dean Van Galen, Chancellor
116 North Hall
University of Wisconsin-River Falls

From: James Graham, Chair
Faculty Senate
University of Wisconsin-River Falls

Re: UWRF Faculty Senate Motion 2015-16/24

The following motion was approved unanimously by the Faculty Senate on October 21, 2015:

A motion from the Academic Programs and Policies Committee (Mialisa Moline, Chair) to approve the following:

   a. Program Revision: Mathematics-Liberal Arts (See Attached)

   [Checkmark] Approved

   [Signature]
   Dean Van Galen, Chancellor

   [Date]
   10/23/15

   [Signature]
   Disapproved
TRANSMITTAL for UNDERGRADUATE PROGRAMS:
Changes or Proposals

I. INFORMATION:

1. Program Title: Mathematics - Liberal Arts
2. Department(s): Mathematics
3. College(s): Arts and Sciences
4. Proposal prepared by: Bob Coffman Date: April 22, 2015
5. Check all that apply
   - [ ] New program
   - [ ] Change in course name
   - [X] Change in major
   - [ ] Change in course content
   - [ ] Existing program
   - [ ] Change in number of credits
   - [ ] Change in minor
   - [ ] Change in emphasis/option

6. Other Programs/Departments Consulted (Requires letters of comment from all Departments or Programs substantially affected):
   a. 
   b. 
   c. 
   d. 

7. Catalog year (and semester) of Implementation:
   Semester: Spring Year: 2015-16

8. Have all courses in this program been approved? Yes [X] No [ ]
   If “No” which courses have not been approved? MATH 385

9. Attach Request Narrative
   Include in narrative on attached pages a rationale for the requested changes or creation of program.
   Include clarification concerning any courses that have not yet been approved. If requesting a
   program change also include a listing of course array for both the current and proposed program.

10. UNIT APPROVALS: Requires signatures of all Department Chairs and Deans whose programs will
    be substantially affected by the changes or proposal. Signature lines for the affected Departments and
    Colleges (noted in “6” above, are on the addendum to this form. These signatures should be obtained
    prior to review by all other shared governance levels.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Department Curriculum Committee Chair</td>
<td>Bob Coffman</td>
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<tr>
<td>Department/Program Chair</td>
<td>Bob Coffman</td>
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<tr>
<td>College Curriculum Committee Chair</td>
<td>John Doe</td>
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<td>Dean of College</td>
<td>John Doe</td>
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<td>University Curriculum Cmtt. Chair</td>
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<td>Academic Policy &amp; Program Cmtt. Chair</td>
<td>John Doe</td>
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<td>Faculty Senate Chair</td>
<td>John Doe</td>
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<td>Provost / Vice Chancellor</td>
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<td>Chancellor</td>
<td>John Doe</td>
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*NOTE: The master copy of this transmittal & accompanying documents must be filed in the Provost’s office upon final approval. The Provost’s office will notify all appropriate administrative offices (Registrar, Dean(s), Department Chair(s)) of approvals & necessary actions to implement changes.

Revised December 2012
The Math Department is proposing that the requirement to take MATH 485 in the Mathematics – Liberal Arts major be replaced by the following: "MATH 385 or MATH 485", as shown:

**Mathematics Major**

**Mathematics Major - Liberal Arts**

**Mathematics Major - Liberal Arts: 37 Total Credits**

**Required Courses: 19 cr. hrs.**

- MATH 166 Calculus I 4 cr.
- MATH 167 Calculus II 4 cr.
- MATH 236 Discrete Mathematics 4 cr.
- MATH 256 Linear Algebra 3 cr.
- MATH 266 Calculus III 3 cr.
- MATH 485 Seminar in Mathematics (writing intensive) 1 cr.

Undergraduate Research in Mathematics 1 cr.

or MATH 385 Mathematical Writing 1 cr.

**Directed Electives: 18 cr. hrs.**

Select at least six mathematics courses numbered higher than 300, excluding MATH 305 and 436. MATH 305, 385, 436 and 485.

**Required Supporting Courses: 3 cr. hrs.**

Select one from

- MATH 205 Mathematical Programming 3 cr.

or PHYS 211 Scientific Program 3 cr.

or CSIS 162 Programming II 3 cr.

Under this proposal, all Liberal Arts – Mathematics majors would be required to take either MATH 385: Writing in Mathematics or MATH 485: Undergraduate Research in Mathematics. MATH 485 would now be intended for Liberal Arts – Mathematics students who want a strong research experience that would include presenting or exhibiting their work outside of the department. MATH 385 would not provide an undergraduate research experience, but would still provide students with an opportunity to become better writers in mathematics.

Currently all Liberal Arts – Mathematics students work individually with faculty members who supervise their senior seminars as part of MATH 485, but this is proving unsustainable due to the reduction in the number of regular faculty in the department. By focusing its resources on those majors who want to pursue undergraduate research, rather than merely fulfilling a requirement, the department hopes to provide a more intense capstone experience for its Liberal Arts students than is currently offered to those who take MATH 485 – including presentations at forums outside of the department, e.g., poster sessions, URSCA events, student mathematics conferences, etc.
Math Department Meeting Minutes
Monday, September 14, 2015
Present: A Chatterjee, K Chavey, R Coffman, I Ghenciu, E Hofacker, K Tomlinson, A Tupan, R Gunter, J Salmon
Absent: L Langford

Meeting called to order at 3:15
1) Chair’s report.
   • NH Infrastructure, Wed 9/23
   • J-term offerings
   • PLTL success
   • Learning Assistants now and in the future
   • Wisconsin Mathematical Modeling Challenge and St. Norbert’s Conference
   • Davee Library Collection Development

2) Motion to approve Search and Screen Committee for Math Ed position (Coffman, Chatterjee)
   Proposed committee: E Hofacker (chair), K Tomlinson, L Langford, S Ahrendt, Chelsea Nelson (student)
   Discussion: The entire department wants access to finalist files. Kathy will get clarification from B Creighton in HR about whether this should be a committee or a sub-committee to enable this. Motion passes.

3) Motion to make a minor modification to the MATH 485: Undergraduate Research in Mathematics course proposal: Increase “maximum number of credits” = “maximum number of attempts” from two to three. (Coffman, Chatterjee). Motion passes.
   Motion to approve Math 385, Math 485 and the associated Program Change. (Ghenciu, Tupan) Discussion: Under the list of Directed electives it should read: Select at least six mathematics courses numbered higher than 300, excluding MATH 305, 385, 436 and 485. Under the list of Required Supporting Courses one of the options is missing: PHYS 211 Scientific Programming (3 cr.). Motion passes as amended.

4) Motion to substitute CSIS 488 for MATH 485 for all students majoring in Data Science with a double major in mathematics. (Ghenciu, Coffman) Discussion: Chavey raised the issue of the distinction between waiving MATH 485 and substituting MATH 485. Clarification: this is a substitution versus a waiver. Coffman raised the issue of how this double major will need its own code such as MATH.DSCI.MJ, to distinguish it from other double majors where MATH 485 is a requirement. Motion passes.

5) Agree upon a process to update the “Expectations for the Faculty of the Department of Mathematics” (last updated in 2003). Kathy will make a first effort at an update and bring it to the entire department.

Next meeting: Monday, September 21, 2015 at 3:15.
Meeting adjourned at 4:00.