November 17, 2014

To whom it may concern:

We have been asked to provide input about a new initial certification pathway program that is in the process of being developed at UW-River Falls. Our understanding is that this program would be used to provide post-bacs (including those changing careers, as well as recent graduates that are now entertaining the idea of teaching) a one-year pathway to become licensed to teach in various areas of STEM. We are supportive of providing a program like this for teacher candidates to become licensed to teach mathematics, as long as they have the necessary background in algebra, geometry, and probability.

We currently have an EA-A licensure program in mathematics for undergraduate teacher candidates. We foresee the current program and the STEMteach program meeting the needs of two different populations. As such, then, while we support the STEMteach proposal, we would not be in favor of replacing our undergraduate program with the STEMteach undergraduate program.

We would, however, inform seniors in our Liberal Arts – Mathematics program about the STEMteach program. Doing so would provide them an opportunity to pursue EA-A licensure after they complete their Liberal Arts degree, giving them a career option that they might not have considered previously. We would not, though, recruit teacher candidates for STEMteach from the ranks of Secondary Education – Mathematics majors.

We currently offer graduate level math courses as part of the MSE-Mathematics program. Since there are plans to incorporate an initial-certification master’s within STEMTeach, the Math Department would support the enrollment of in-service math teachers into targeted MSE-Mathematics courses for the fulfillment of any applicable STEMteach content coursework requirements.

Note that the department feels that it would be very problematic to provide the staffing needed to support this program from within the current ranks of its tenured faculty.
Rationale for STEMteach as a New Option or Emphasis for the MSE in Secondary Education

NOTE: This will be a new option or emphasis for our Master of Science (MSE) in Secondary Education. It will have its own designator (UTCH) and mostly new curriculum (i.e., current TED courses may be used to fulfill requirements for the master’s degree – 6 to 10 credits). After the STEMteach curriculum is approved at UWRF, a proposal will be submitted to the Wisconsin Department of Public Instruction (DPI) for approval as an initial teacher licensure program under PI 34.08, Experimental and Innovative Programs. This category of program approval was created to cover programs in “high need” teaching areas that are not in full compliance with rules in PI 34. The WI DPI licensing division is aware that we are developing this program.

The College of Education and Professional Studies and Outreach and Continuing Education are developing a graduate teaching certification program with optional master’s degree. This cohort-based program will admit qualifying science, technology, engineering, and mathematics (STEM) degree holders and train them to be science and mathematics teachers for middle and high school classrooms. The program is being designed by a cross-campus team which is working closely with the nationally-recognized UTeach Institute at the University of Texas at Austin.

The driving force for the creation of this program was the desire to leverage the inherent strengths of the University of Wisconsin-River Falls’ teacher education, chemistry, biology, physics, and mathematics departments while fulfilling a national and statewide need for more and better STEM educators. STEMteach makes it possible for STEM professionals to attain teacher licensing via a rigorous, supportive, and compact program.

The nine STEMteach courses (UTCH 701-709) which comprise the initial certification pathway are being submitted for approval concurrently with this program change request. The optional master’s degree pathways are comprised of existing (approved) UWRF courses. The proposed STEMteach curriculum is summarized on the following page.

Partial funding for UW-River Fall’s STEMteach program is provided by the National Science Foundation through the Robert Noyce Teacher Scholarship Program.
Proposed STEMteach Curriculum

Initial Certification Coursework (24 graduate degree credits, 30 total graduate course credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>UTCH 701</td>
<td>Step 1 and 2 Combination (3 cr)</td>
<td></td>
</tr>
<tr>
<td>UTCH 702</td>
<td>Knowing and Learning in Math and Science (3 cr)</td>
<td></td>
</tr>
<tr>
<td>UTCH 703</td>
<td>Classroom Interactions (3 cr)</td>
<td></td>
</tr>
<tr>
<td>UTCH 704</td>
<td>Project-Based Instruction (3 cr)</td>
<td></td>
</tr>
<tr>
<td>UTCH 705</td>
<td>STEM Content Area Literacy (3 cr)</td>
<td></td>
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<tr>
<td>UTCH 706</td>
<td>Functions and Modeling (3 cr)</td>
<td></td>
</tr>
<tr>
<td>UTCH 707</td>
<td>Perspectives on Science and Mathematics (3 cr)</td>
<td></td>
</tr>
<tr>
<td>UTCH 708</td>
<td>Apprentice Teaching Seminar (3 cr)</td>
<td></td>
</tr>
<tr>
<td>*UTCH 709</td>
<td>STEM Apprentice Teaching for Secondary and Middle Grades (6 cr)</td>
<td></td>
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</tbody>
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*Apprentice Teaching credits do not count toward required credits for optional master’s degree

Master's Degree Pathways (optional, 6-10 additional graduate credits)

Plan A (Thesis), 6 additional graduate credits:
- TED 760 Methods of Research (3 cr, on-line)
- TED 799 Thesis (also could be a STEM 799 course) (3 cr)
  Oral or written comprehensive exam

Plan B (Research Paper), 6 additional graduate credits:
- TED 760 Methods of Research (3 cr, on-line)
- TED 798 Independent Research (also could be a STEM 798 course) (3 cr)
  Oral or written comprehensive exam

Plan C (Additional Credits), 10 additional graduate credits:
- TED 760 Methods of Research (3 cr, on-line)
- 7 credits of 500 level or greater coursework
  Oral or written comprehensive exam

 Transfer or elective credits must be approved by the Program Director
All requirements for this degree must be completed within seven years from the start of the first term.
10/22/2014

To Whom it May Concern:

The College of Education and Professional Studies (CEPS) is submitting nine new course proposals as part of a requested new graduate program, to be called STEMteach. STEMteach is designed as a route for science, technology, engineering, and mathematics (STEM) degree holders to earn initial teaching licensure. An optional master’s degree in secondary education is also being developed.

The purpose of this letter is to provide written approval for the STEMteach initial certification pathway courses (UTCH 701 through 709) to be exempt from the final exam requirement. Candidates in each of the courses will be continually and individually assessed by university faculty, master teachers, and cooperating teachers. Assessment will involve the use of a Certification Portfolio. A final and thorough assessment of each candidate during the last semester of the initial certification pathway will use the Stanford University and AACTE-developed Education Teacher Performance Assessment (edTPA).

Sincerely,

Larry Solberg, Dean