Hi Diane

The Chemistry Department supports the proposed STEMteach graduate program that you have outlined. Great work!!

Karl

Mark Bergland
Wed 10/29/2014 12:23 AM
To:
Diane Bennett;
Cc:
Karl Peterson;
Robert Coffman;
James Madsen;
You replied on 10/29/2014 7:37 AM.

Hi Diane,

The Biology Department supports approval of the STEMteach graduate program that you have outlined. I also would like to thank you and your colleagues for your hard work on this initiative.

Regards,

Mark

Mark Bergland, Chair
Biology Department, AGS 410
University of Wisconsin - River Falls
River Falls, WI 54022
mark.s.bergland@uwrf.edu
715-425-3591 (office) or 715-529-8845 (cell)
James Madsen  
Tue 10/28/2014 2:08 PM  
Deleted Items  
To:  
Diane Bennett;  
Mark Bergland;  
Karl Peterson;  
Robert Coffman;  

Dear Diane:  
The physics department supports approving the STEMteach graduate program.  
Thank you for all your work on this initiative.  
Jim  

Jim Madsen  
Professor, Chair  
Physics Department  
UWRF  
410 South Third Street  
River Falls, WI 54022  

Associate Director for Education and Outreach  
Wisconsin ICECUBE Particle Astrophysics Center  

715-425-3235 Office  
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To Whom it May Concern:

There are nine courses in the STEMteach initial certification coursework sequence. There is overlap between these courses, secondary education, elementary education, and mathematics courses offered at UWRF as well as overlap between courses in the STEMteach sequence itself. A partial list of UWRF courses which complement and support each of our STEMteach courses includes:

- **TED120 Introduction to Education and Technology** (with proposed Step 1-2 Combo)
- **TED212 Educational Psychology and TED 745 Educational Psychology** (with proposed Knowing and Learning)
- **TED252 Multicultural Education** (with proposed Classroom Interactions)
- **MATH 305 Integrating Technology in Teaching Secondary Mathematics**
- **MATH 436 History of Math**
- **TED414 Transcendent Development** (with proposed Classroom Interactions)
- **TED438 Math Techniques** (with proposed Classroom Interactions and Project-Based Instruction)
- **TED434 Science Techniques** (with proposed Classroom Interactions and Project-Based Instruction)
- **TED465 Classroom Management** (with proposed Knowing and Learning and Classroom Interactions)
- **TED422-424, 622-624 Content Area Literacy** (with proposed Classroom Interactions, Project-Based Instruction, and STEM Content Area Literacy)
- **TED420 School and Society and TED 740 History, Philosophy, Multicultural Education** (with proposed Perspectives)
- **Elementary education courses**

This long list reflects the fact that the STEMteach courses are designed in a fundamentally different way than existing teacher education and mathematics courses at UW-River Falls. Specifically, the STEMteach courses are sequential, STEM-content focused, technology infused, inclusive of early field experiences in a diverse range of learning environments, and offered exclusively to graduate students. STEMteach courses are designed to bring science and mathematics students together because there is a fundamental connection between science and mathematics that students must understand and appreciate. Moreover, STEMteach courses are designed to be rigorous. This rigor will be a fostered by the intellectual maturity of the student population, all of which will have a STEM degree and some of which will have professional experience. In contrast, the above list of courses can be taken in a varied order because they are focused on a narrow topic; only four of the above courses are specific to STEM students; only the elementary education courses use elementary classroom experiences; and the courses are not open to graduate students. The current mathematics and science education courses are not designed for a combined student body of BOTH science and mathematics students.

Furthermore, a primary goal of the STEMteach program is for students to understand the fundamental nature and importance of inquiry in all the work that scientists do. In turn, STEMteach graduates should help their students understand what scientific inquiry is about, and enable them to develop the abilities to...
conduct scientific inquiry. (From "Content Standard for Science as Inquiry" in Inquiry and the National Science Education Standards, 2000)

If you have questions about the STEMteach program or individual courses, please do not hesitate to contact me.

Sincerely,

[Signature]

Geoff Scheurman

University of Wisconsin-River Falls, Teacher Education, Chair