programs in STEM fields. For example, in the current year the ACT math composite for UWRF Physics majors is at 26.29 and 26.26 for ACT science. Across Math, Chemistry, and Computer Science the Math and Science ACT composites are between 23 and 24. For the existing Agriculture Engineering Technology major the ACT composites are between 22 and 23 for Math and Science.

In addition to embracing its identity as an institution of opportunity, UWRF can attract quality students to rigorous and attractive majors (such as engineering or the forthcoming Data Science degree) and the ACT composite scores for high school students in the region are among the highest in the state of Wisconsin. Beyond, the discussion around engineering has already encouraged very positive dialogues between the university and regional high schools (such as River Falls, Hudson, Somerset, Osceola, etc.) that have a keen interest in promoting STEM education and careers. Moreover, the university can target particular high schools in Minnesota (especially in the Twin Cities metropolitan area), a state with the highest ACT scores in the nation for 2013.

The three UW comprehensive universities that are part of the Northwest Wisconsin Engineering Consortium can partner with schools in the region with enviable ACT profiles (such as Eau Claire Memorial at 24.2; Hudson 23.8; New Richmond at 23.6) that place them in the top 60 high schools in the state according to Milwaukee Sentinel-Journal (Aug 20, 2014) and the opportunity to recruit (as a consortium) in other regions (such as the Northeastern part of the state) where NCHEMS has identified engineering as a need. In fact, each of the school districts in the region most directly served by the consortium partners (Chippewa Falls, Eau Claire Area, Hudson, Menomonie, and River Falls) performed better on the ACT math exam than the Wisconsin statewide average in 2012-13. Beyond these
immediate schools there are talented students in smaller and more rural school districts that UWRF plans to deepen already existing relationships (particularly connected to the university's College of Agriculture, Food and Environmental Sciences) to focus on engineering programs and careers in Northwest Wisconsin.

The consortium members welcome the opportunity to work with UW two-year institutions and recognize that the proximity of UW-Barron County and its pre-engineering sequence could be a valuable ally in the recruitment of students to engineering fields. Further, other UW colleges’ campuses (including Waukesha) have indicated an interest in partnering on engineering pathways to the baccalaureate degree and UWRF will continue to cultivate such relationships with technical, tribal, and two-year colleges across the northern tier of Wisconsin.

**Summary and Benefits**

Over the past several years each UW institution has been charged with developing activities that connect to economic development; to emphasize degree programs and curricular reform that ensure workforce development and encourage educational partnerships; and to develop talent and create jobs. UWRF, as one member of the Northwest Wisconsin Engineering Consortium, has looked toward engineering degrees as an important academic route to all of the above mandates from UW System Administration and the UW Board of Regents. Evidence of the potential regional impact of engineering programs offered by UWRF (and its consortium partners) is suggested by the various letters in support of the consortium that have come from industry, K-12, and economic development partners.

UWRF perceives that it is in a strong position given its current array of academic
programs, facilities, and location in one of the fastest growing and economically dynamic regions in the state of Wisconsin. UWRF, like its consortium partners at Stout and Eau Claire, has heard the industry needs for a talented and stable workforce—one that is attracted to the small and midsize communities east of the St. Croix River. There is little doubt that STEM disciplines, particularly engineering, can be catalysts for profound regional economic development. Evidence of this is found in dense university clusters with various and overlapping engineering programs in such states as California, Texas, and Massachusetts. UWRF, as well as UW-Eau Claire and UW-Stout, seeks to provide high quality engineering programs that are academically rigorous and responsive to industry needs.
DATE: February 12, 2015

TO: Fernando Delgado, Provost and Vice Chancellor for Academic Affairs
    UW-River Falls

FROM: Stephen H. Kolison, Jr.  
      Associate Vice President for Academic, Faculty, and Global Programs

RE: Pre-Authorization for a B.S. in Agricultural Engineering

On October 15, 2013, you invited all UW System institutions and the Office of Academic, Faculty, and Global Programs to comment on your proposal to plan a B.S. in Agricultural Engineering. Subsequently, substantive concerns were expressed by other UW institutions regarding the demand for new engineering programs given the high resource commitment required to establish them. Other concerns expressed were related to duplication and the supply-demand ratio in specific engineering fields. These concerns, among other array management considerations, led to discussions among the UW institutions, as well as a demand study commissioned by UWSA from the National Center for Higher Education Management Systems.

After carefully considering different data sets, including the systemwide array, regional needs, employer testimonials, and the perspectives of institutions within the UW System, Interim Senior Vice President David J. Ward recommended to the Board of Regents and the President of the UW System that four of the proposed eight new engineering programs submitted to UW System Administration for review be granted a pre-authorization to plan.

On Friday, February 6, 2015, the Education Committee of the Board of Regents discussed the need for new engineering degrees in the UW System and endorsed Interim Senior Vice President Ward’s recommendation for the planning of four new baccalaureate engineering degrees. The B.S. in Agricultural Engineering proposed by your institution was among the four programs granted pre-authorization to plan. Congratulations!

It is our understanding that this program will be offered face-to-face. Also, as articulated by Interim Senior Vice President Ward at the Board meeting, among the conditions for authorization are the demonstration of clear demand supported by conclusive data, a confirmation that no new resources are needed to develop and implement the program, a precise analysis of the overall cost of implementation, a consortial element to reduce cost, mission congruence, demonstration of non-duplication, pursuit of ABET accreditation, and Higher Learning Commission approval, if applicable.
After you have had a chance to review and endorse the authorization document and financial statement that the Board of Regents will review, please submit them along with your Letter of Commitment electronically to afgp@uwsa.edu. When you submit these documents, please also indicate the tuition and fees that will be charged to students who enroll in this program.

This pre-authorization will expire five years after the date of this memo if this program has not been authorized by the Board of Regents prior to that date.

Please contact Laura Anderson at 608.265.6921 or landerson@uwsa.edu if you would like assistance with the development of the authorization documents.

Again, congratulations to you and your faculty for gaining the pre-authorization to plan this program. We appreciate the opportunity to work with you in this endeavor.

cc: Raymond C. Cross, President  
David J. Ward, Interim Senior Vice President, Academic and Student Affairs  
Dean Van Galen, Chancellor, UW-River Falls  
Provosts and Vice Chancellors  
UWSA Program Planning Team  
Institution Program Planning & Review Liaisons