

*Minutes of the UW System Board of Regents  
Education Committee*

February 6, 2015

On February 6, 2015, the Education Committee reconvened during the meeting of the Full Board.

Regent Bradley reconvened the meeting of the Education Committee at 11:00 a.m. Regents Evers, Hall, Manydeeds, Petersen, Purath, Vasquez, and Whitburn were present.

The committee discussed the possible addition of new engineering programs in the UW System. Interim Senior Vice President Ward gave an overview of the engineering supply and demand in Wisconsin and made the recommendation to issue UW System Administration permission to plan for four of the eight originally proposed programs.

Ward commenced his presentation by describing the UW System approval process for new academic programs, as well as, next steps to be completed by the institutions before requests for new engineering program authorizations are brought to the Education Committee for possible approval as early as April, 2015. In taking a statewide approach to addressing engineering needs, he recommended the Board of Regents adopt his recommendation to allow planning at the following locations: at UW-Stevens Point, a B.S. in Chemical Engineering; at UW-River Falls, a B.S. in Agricultural Engineering; at UW-Eau Claire, a B.S. in Materials Science Engineering; and at UW-Stout for B.S. in Mechanical Engineering.

Regent Vasquez requested some explanation of the differences between the various proposed engineering programs. "How independent are these areas or do they blend together," he asked. Ward reported that each presented a specialty area in the field of engineering with its own history. At the junior and senior level of classes, the differences in engineering majors become apparent.

Regent Harsy inquired about the cost of expanding the engineering array, particularly in the context of imminent big budget cuts. With regard to cost factors, Ward noted that "there are no new resources so UW institutions are going to have to figure out how to finance this." Options would include reallocation of campus resources and industry support.

UW-Eau Claire Chancellor Schmidt shared that the Northwest Engineering Consortium partners (UW-Stout, UW-Eau Claire, and UW-River Falls) were committed to keeping costs down. Students would be able to start at any of the three universities and switch to any engineering concentration or major. Chancellor Schmidt further stated there were no costs to implementation as the qualified faculty, labs, and the curriculum were already in place. Chancellor Schmidt informed the Regents that UW-Eau Claire's Rhodes Scholar is a major in Materials Science.

According to Ward, one of the conditions for Regent approval is that the campuses self-finance the proposed programs. Regent Whitburn inquired if that meant that new priorities and no new resources would mean that the campuses would consider suspending or eliminating other

programs? Ward replied that the addition of engineering programs would lead to a general growth in enrollment and that private money would also help finance the implementation.

UW-Platteville Chancellor Shields then took the floor and urged the Regents to focus on answering where additional students would come from, and to engage in a full exploration of the other reasons that drive why the state does not seem to produce enough engineers, despite a 35 percent growth in engineering graduates in existing engineering programs. According to Chancellor Shields, 85 percent of the Engineering graduates stay in the state and often return to their communities in the northern and western parts of the state. Chancellor Shields advised against investing heavily into new engineering programs at this point and proposed alternative collaborative efforts to find out if indeed the demand is really there.

UW-River Falls Chancellor Van Galen then explained that the University's dairy science program was the second-largest in the country. According to Chancellor Van Galen, 72% of UW-River Falls' students live within 100 miles of the university, "a long way from Madison and Milwaukee. Adding that businesses in the region have asked the University to be responsive, and given the pipeline with K-12 Systems in the region, Chancellor Van Galen shared that UW-River Falls had already reallocated two teaching positions, identified appropriate spaces, and made connections with the agricultural engineering technical programs.

Regent Whitburn asked about the collaboration partners involved in the Consortium. Would all four universities be part of it? UW-Stout Chancellor Meyer responded that only UW-Stout, UW-River Falls, and UW-Eau Claire were partners. Further, Regent Whitburn inquired if a student could transfer between any of the four proposed programs, to which Interim Senior Vice President Ward responded that generally most courses would transfer.

Regent Vasquez sought to clarify what the recommendation to start planning four new engineering programs would mean. Was the recommendation a go-ahead to bring these proposed programs forward and was it a done deal? Ward responded that his recommendation did not represent blanket permission but that any program coming to the Regents for approval would be assessed for risk and cost, and any decision would be made in the context of considering the entire array. When the authorization documents will be submitted for UWSA review, they will have to meet the published criteria and confirm that the respective university bears the financial risk. Ward indicated that hard decisions had already been made and that investments into existing programs at the proposing institutions were already underway. Nevertheless, the authorizations would have to meet all criteria set by UWSA.

Regent Higgins stated that he was inclined to approve the requests, as published studies indicate that there is expanding geographical demand and that nontraditional regional students could be better served. Regent Farrow expressed her interest in effective cost control. She recommended engaging engineering technology programs and technical colleges in helping to satisfy demand for engineering graduates. She recalled a presentation by Jeff Immelt to the Board which urged the Board to respond to the need for engineers in the state and the nation. Regent Farrow indicated that she thought that a good framework was in place to fill any long-range need.

Regent Evers commented that even if the need for engineers is local, most students are willing to enroll in existing engineering programs and would still choose UW-Madison or UW-Milwaukee if appropriate for them.

UW-Green Bay Chancellor Miller spoke in support of the proposed engineering programs. His contacts in the New North region confirm that more engineering graduates are needed. Further, confirming that engineering technology programs could be leveraged, he offered UW-Green Bay's help in establishing new partnerships. Ward added that UW-Platteville and UW-Milwaukee would be in excellent positions to expand their engineering delivery in the New North region.

UW-Platteville Interim Dean of the College of Engineering, Mathematics, and Science Muslu strongly recommended that the decision regarding the engineering array had to take into account the state as a whole. He cited data previously circulated to the Regents by the Engineering Deans of UW-Milwaukee, UW-Madison, and UW-Platteville that showed that the current 30% growth in engineering graduates already satisfies present and future demand. He also reminded the Regents that labs were very expensive to establish and to maintain. Further, the demand for engineering graduates tended to be cyclical.

In response to Chancellor Shield's comments, Regent Millner said she appreciated the points he made about competition. However, the market did seem to be growing and apparently there would be a continuing need in the northwestern region of the state. She also indicated that proximity to Minnesota was an additional factor in determining demand and that the consortium would cater to different markets.

Regent Petersen spoke in favor of issuing permission to plan for the proposed four engineering programs. He cited demand, existing faculty expertise, student demand, and support by industry as the main reasons for executing the plan as presented by Ward.

UW-Milwaukee Dean Brett Peters of the College of Engineering & Applied Science urged the Regents to consider a different action. Peters explained that quality considerations needed to be a top priority. He asked the Regents to support existing programs that meet employer need in the state and to consider the role of research in engineering for economic development. The solution to increasing demand for engineering graduates would be to expand collaborative efforts and to expand programs that have been serving the needs of industry for many years. Peters suggested that pilot programs and careful expansion of capacities would be a better solution for long-term planning. He asked the Regents not to dilute existing engineering programs.

Regent Millner inquired about the flexibility of the approval timeline and when the institutions receiving pre-authorization to plan had to implement any program. Ward reported that institutions have five years to implement. Regent Millner further asked about market analyses that clearly outlined needs in different areas of the state. Ward replied that the data tend to show a broad state view and that better data are needed per region.

To Regent President Falbo's question whether the projections for demand (based on Bureau of Labor and Wisconsin Department of Workforce Development data) were still fairly short-term, Ward replied that they were indeed on the conservative side. Further, the data

seemed to show that the long-term net annual engineering demand was not due to retirements but to problems in retention. Regent Whitburn then remarked that he saw an inevitable natural emigration pattern among engineers. Ward agreed and added that projections also do not fully account for graduates that will start their own companies and become entrepreneurs.

Regent Purath inquired how many of the existing engineering programs were at capacity, to which Ward responded that several engineering campuses reported that they have enrolled more students. UW-Madison Chancellor Blank told the Regents that chemistry labs at her institution were now used 24 hours a day.

After discussion with the full Board ended, the Education Committee endorsed the continued planning for new engineering programs at four institutions: UW-Stevens Point for a B.S. in Chemical Engineering; UW-River Falls for a B.S. in Agricultural Engineering; UW-Eau Claire for a B.S. in Materials Science Engineering; and UW-Stout for a B.S. in Mechanical Engineering.

Moved by Regent Evers and seconded by Regent Whitburn, the Committee adjourned at 12:05 p.m.

Respectfully Submitted by

Dr. Carmen Faymonville  
Secretary to the Education Committee