A successful transition from high school to college or university requires mastery of fundamental skills in reading, writing and mathematics, and a grasp of key elements in subjects such as social science, literature, and natural science. Equally important, high school graduates need to have practiced the analytical thinking that will characterize their work toward associate or baccalaureate degrees. Effective preparation of this kind depends on coordination between what happens in high school and college classrooms. Although variation in the curricula at both levels is desirable, and is an indicator of pedagogical innovation that benefits students, classroom teachers in high school and college need to agree on the fundamental knowledge and skills expected of incoming college students and developed in high school graduates. These two groups of faculty need to communicate directly and regularly about what and how they are teaching, and about how they determine what students understand.

This proposal will bring high school, community college, and university faculty together to begin this process with the three projects described below. The projects themselves are quite specific. They are deliberately limited in scope so as to make them practical and likely to yield interpretable results. We expect the work to have much broader significance, however, since the mechanisms developed for these projects can be extended and sustained over time. These mechanisms have the potential to facilitate the refinement of standards in all disciplines and the creation of assessments capable of determining whether the standards have been met. Thus, we think they will promote optimal responses to recommendations from the State Boards, both now and in the future, and will contribute to effective alignment in key subject areas that prepare students for post-secondary education.

We propose to

1. Test the effectiveness of the new General Education outcomes framework as a basis for transfer articulation decisions at the college and university level.

2. Develop a universal Math Placement Test to be used by public colleges and universities to gauge students’ readiness for beginning college-level Mathematics, and to permit both high schools and post-secondary schools to accelerate students who are unusually accomplished. The availability of the test in high schools will help teachers communicate college-level expectations to all of their students. Further, we will investigate the possibility that the Oregon Department of Education may find this useful to measure student proficiency of tentatively planned 11th/12th grade standards.

3. Bring high school, community college and university faculty together to compare the content and level of courses at the high school/college interface.
The proposed projects for the 2007-09 biennium build on the earlier success of statewide groups in Writing (OWEAC), Mathematics (OMEC), Business, and Computer Science, as well as the momentum generated by current attention to General Education. Senate Bill 342, passed in 2005, called for better articulation and alignment of the educational enterprise, in general, and as one approach, asked for an outcomes-based framework for General Education. The drafting of this framework will be completed in the current biennium (2005-07), but its application statewide will require regular communication among faculty. We expect these interactions to foster continuous improvement in the quality of General Education throughout the state, and to provide a basis for expanded curricular discussions that include teachers and curriculum designers at the high school level. It is those expanded discussions that this proposal will support. Additional detail on the projects listed above will illustrate the potential of these discussions:

**Project #1** will support meetings of community college and university faculty (both public and private) as they begin to base course transferability decisions on the new General Education Outcomes Statements and Course Criteria. In the short term, we anticipate that the new decision-making process will inspire confidence that course equivalencies on paper correspond to equivalent educational experiences for students. In the longer term, we expect that these collegial interactions among faculty will generate new ideas for courses and curricula, and will catalyze improvements in General Education throughout the state.

**Project #2** will extend the promising work of Mathematics faculty at Lane Community College, who have developed a new placement test in Mathematics. Although Math placement tests are commercially available, and two of these (Accuplacer and Compass) are already in wide use in Oregon, few Mathematics faculty are satisfied with them. The new LCC test appears to be superior, probably because it was designed from the perspective of the specific coursework that students would be placed into. This LCC initiative has attracted the attention of OUS Math faculty who had been thinking along a similar line, and we propose to support a pilot project by a joint group of OUS and community college Math faculty. The pilot will determine the relative merits of various placement tests, including the LCC test, and will examine the feasibility of using the same test throughout the state. A small group of excellent community college and OUS Math faculty who could serve as the nucleus of the group has already been identified. There is also the potential for fruitful interaction with a panel of high school Math teachers, convened by the Oregon Department of Education. This panel is already in communication with teachers in a handful of demonstration sites that are particularly innovative and are committed to collaborating with other educators.

**Project #3** translates the broad vision of inter-sector educational alignment into 3 specific goals:

- One goal is to insure that college-level courses that are taught in all three sectors (beginning Calculus, for example) introduce all students to the same concepts, and do so at the same level of detail and sophistication.

- The second goal is to examine the courses that immediately precede college-level work (courses typically taken by high school juniors and seniors) to verify that their content will position students to succeed in the coursework that follows. We anticipate concentrating initially on Mathematics, in order to support the review and revision of K-12 Mathematics Grade-Level Standards that began in November 2005 and will be finalized in April, 2007, and also to complement the Universal Math Placement Test pilot. Since we expect that this approach will be generally useful, we will apply it in other subject areas, as well --guided by the State Boards’
3. (SBE/SBHE) forthcoming recommendations for curricular change and their suggestions for areas of emphasis.

- The third goal, which is related to the second goal, is to create a mechanism for fostering long-term collaboration among teachers in all three sectors on the formulation and refinement of high school “Course Statements” – that is, descriptions of what courses of particular kinds should include. Joint work will insure that the statements describe knowledge and skills that are truly college-preparatory, and that the statements are also realistic and specific enough to be useful to high school teachers. These concepts and skills will be cross-walked to the K-12 mathematics Grade-Level Standards in order to foster communication with a broad population of high school teachers. The collaboration required to achieve this goal could evolve to include periodic review of college-level courses taught in high school, along with their college/university counterparts, by 3-sector faculty groups, similar to those responsible for Project #1.

Outcomes expected from the four projects in this Policy Package:

1. The efficiency of students’ use of college/university credits will increase as a result of better articulation of their General Education coursework.

2. High school students will enter college with stronger Mathematics skills because they and their teachers will be able to see, via the universal Math Placement Test, exactly what is expected at the college level throughout the state.

3. High school courses will be more effective in preparing students for college work because the courses will be designed and delivered with an understanding of the content of the college courses that follow them. Moreover, students who take college-level courses in high school will be confident that their experience is truly a collegiate one.

4. Requirements, Rewards, and Recognition: We anticipate that the joint work initiated with these projects will lead to clear pathways for demonstrating proficiency in college-preparatory subjects. Multiple options will be available and these will be calibrated with one another so that the results by any method will be comparable. For example, if a common Math placement test is adopted, students’ performance on it will be calibrated against other measures of Mathematics mastery. Thus, if this placement test is widely available in high schools, both students and teachers will have a good idea of what the results suggest about readiness for particular Math courses and also about students’ likely performance on other assessments. Finally, cross-sector collaboration will help set realistic requirements and appropriate rewards and recognition for student achievement.

Performance Indicators:
- Track the time and number of credits students use to complete the General Education part of their degree work. We will be particularly interested in these data for transfer students, since improved articulation of General Education coursework should eliminate unnecessary repetition of General Education courses.
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- Measure students’ performance on the universal Math Placement Test. Initially, use of a common test throughout the state will give a baseline indication of current high school graduates’ Math skills. Continued measurement over time, will be used to determine whether improvements to the K-12 curriculum (for example, the additional year of math required for a diploma) lead, in fact, to greater Math capability.

- Use the Oregon P-20 Information System (OUS Policy Option Package # ___) to track students’ academic history. We anticipate that this system, which will link student records in all 3 sectors, will be available for Fall 2009. It will allow us to correlate particular patterns of high school coursework with placement test levels and with subsequent academic performance in community college and university. Such a system would be informative for our proposed work in Mathematics, but would be equally valuable when applied to students’ academic work in other areas.

Budget

Under development