



DATE: April 14, 2016

TO: Wes Bryan, President

FROM: Omid Pourzanjani, Vice President, Instruction & Student Learning

CC: Rick Hicks, Math PVR 2.0 Committee Co-chair
Yvonne Portillo, Math PVR 2.0 Committee Co-chair
Martie Ramm Engle, Academic Senate President
Jeff Courchaine, Math & Sciences Dean
Pete Bouzar, Mathematics Department Chair

RE: Math Program Vitality Review 2.0 Recommendations

I would like to start by expressing my deepest appreciation to the Math PVR 2.0 Committee members and their dedication to this work. They should be commended for their diligence in reviewing and evaluating a mountain of data, for their collegial and honest collaboration on this important topic, for proposing a number of excellent recommendations, and for preparing and submitting the PVR report. I would especially like to thank Chief Rick Hicks and Dr. Yvonne Portillo for their leadership of this effort.

In reviewing the report and recommendations, it is clear to me that the college cannot implement all the recommendations from this report at once. Therefore, I have identified a number of the recommendations that I would like to support and forward to you, some directly as expressed and some with revisions:

- 1) The issue of large class sizes is an understood barrier to student success in difficult STEM courses (Recommendations #5 and #7). Subsequent to the submission of the committee's report, I have collaborated with the program faculty regarding this item considering various factors such as room availability, part-time faculty availability, Active Learning educational models, and SIA support. Given all these dynamics, the faculty have elected to stay with the current class sizes but have requested SIAs of their choice that are at the graduate student level. I support this request. Additionally, I will continue to assert that when the conditions are more favorable, the College should consider smaller class sizes for these critical courses.
- 2) As the committee has already identified and supported with nationally acclaimed research and reports, contextualized content is a proven method for increasing learning and student success. In light of the data provided in the report, the first step in responding to the Transfer Math improvement initiative is to offer Statistics courses that are contextualized in various and in-demand subject areas. As such, I recommend the College to proceed with introducing Statistics for Social and Behavioral Sciences, Statistics for Business, and Statistics for

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Biochemistry. Of course, these new courses must be designed for articulation and for CSU and UC transfer pathways.

Furthermore, the Transfer Math faculty have expressed their interest in introducing a pre-Statistics course for students that would like to pursue the non-algebra pathway to completing their college math requirements in Statistics. This will be a below-100-level course and will be considered a remedial math course. The Transfer Math faculty have agreed that the offering of this new course will happen through the College Readiness for Math program but that the Transfer Math faculty could teach sections of this course as part of their overload. We have also agreed that when the College Readiness for Math is formally recognized by the Academic Senate bylaws and able to have a representative on the Senate, that the remedial math curriculum will be fully transferred to this program. Curricular duplication and/or conflicting prerequisites will also have to be resolved during the curriculum development process, to avoid potential curricular conflict for students and ensuring multiple pathways for certification.

- 3) The committee has proposed increasing of student access to faculty (Recommendation #4). The college has supported the creation of the STEM Center and the pursuit of a Title III/V STEM grant to provide operational support for the STEM Center activities. The College has also provided support for a regionally best-in-class STEM Center and Maker Space as part of the new Math/Science building. This space will provide students and faculty with opportunities to interact on exciting applications in math, sciences and technology. Furthermore, the College has started offering part-time faculty stipends for maintaining office hours. The College will continue its support for faculty to seek new grants and external funding to extend faculty's engagement with students and with the community.
- 4) The committee has also expressed their concern for lack of sufficient full-time faculty for the Transfer Math program. It is the case that Math Department had seven (7) full-time faculty members three years ago. Today, we have three (3) full-time faculty members in Transfer Math and three (3) full-time faculty members (one faculty is grant-funded) in College Readiness for Math. Additionally, the College has hired a new Transfer Math faculty member to start in fall 2016. This new hire will bring the total number of full-time faculty members teaching math back to seven (7).

However, I agree with the committee that the College needs more full-time faculty teaching and supporting math-related courses. Therefore, I recommend for the College to add a tenure-track faculty in College Readiness for Math and a tenure-track faculty in Transfer Math as soon as such positions are available and supported through the Academic Senate full-time faculty request process. These additional hires may be initially funded by current and future grants (such as BSI, Title III, or the new STEM grant) if approved by those committees and recommended. It may also be possible in the future to move some of those positions to General Funds once additional open positions are available.

Furthermore, I support the program's request for hiring at least three more full-time faculty members above their current level as funding for positions become available and as supported through the Academic Senate full-time faculty request process.

- 5) Recommendation #10 has requested support for in-class technology. I believe the College has existing processes for requesting instructional equipment and technology through the Wish List Request process, State Funded Equipment Funds, and the Program Review Resource Request process. I look forward to seeing more detailed plans from the program on the use of technology in a flipped classroom model and in disaggregation of lab activities from lecture activities in STEM-specific math courses. Additionally, I will engage District IT to better understand the resources required to improve Wi-Fi access in Math instructional areas. Limited expenditures to respond to this issue may be considered since the program will soon be moving into new facilities.
- 6) The addition of the new full-time faculty will also allow the program to implement its plans for assigned coordinators for Math course groups (Recommendation #2). I support the program's desire for having a coordinator for each course or a group of related courses (such as Calculus). The addition of the new tenure-track faculty as proposed in recommendation #3 will allow the Math courses at the College to have dedicated coordinators. As proposed by the committee, the course coordinators will work with other full-time and part-time faculty teaching sections of a particular course to ensure alignment of their content according to the Course Outline of Record, entry/exit criteria and exams.
- 7) The committee has requested the formation of Learning Communities centered on STEM coursework (Recommendation #9). I support the faculty from Math, Counseling, and College Success to attend related conferences and professional development programs to explore models that can be implemented at GWC that would maintain long-term financial viability. I offer to personally work with the faculty and the division dean to move this activity forward. Furthermore, I propose that the College consider using some of the existing sections, or adding additional sections of College 100 to augment first-level math courses in STEM fields to create a "First Year Experience" model for STEM students.
- 8) Recommendation #8 requests support for STEM gateway courses. The College, through RCC, has approved a part-time counselor to work with STEM students in "Disproportionality Impacted" Student Equity groups to increase their engagement and success in STEM. Pending the outcome of this pilot project, the College will consider future activities regarding this recommendation.
- 9) The committee has also requested consistent and sustained Professional Development (Recommendation #1) and I strongly support this recommendation. I request for the funds that were allocated for the Math 2.0 PVR to roll-forward and support the faculty in acquiring the necessary training to successfully update and reconfigure their curriculum, instructional material, and teaching methodologies and practices. Long-term funding for Professional Development has always been available through IPD. Additionally, the College is considering the addition of a Faculty Professional Development Coordinator to support more holistic and sustained faculty training opportunities and strategies.

10) Finally, the committee requests that the College bring remedial math and transfer math under the same Academic Division. While I support this recommendation, I believe that the many recommendations from Math PVR 2.0 for Transfer Math will take some time to initiate, implement, and institutionalize. This work should be priority effort for the transfer program. I also believe that College Readiness-Math is in the early stages of implementing a number of best practices in partnership with the high schools, and in partnership with adult schools with the use of Adult Education Block Grant funds.

After these initiatives in College Readiness - Math and in Transfer Math have been fully and successfully implemented and institutionalized, I recommend that the College explore options in locating these two departments in the same academic Division to further promote and increase their collaboration and improve transition pathways for all students.

In conclusion, I would like to once again thank the committee for their open and collegial collaboration on preparing and proposing a thoughtful and well researched report and an achievable set of recommendations.