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Page 1: Full-Time Faculty Position Form

Q1

Please enter the following:

Department	Mathematics
Position Title	Math Faculty

Q2

1. Which program review goal(s) is this request supporting? Please state how the position will help advance the specific goals. (Rubric Criterion 3) (300 words or less)

This position supports both of our goals.

Replacing the full-time math faculty member we will lose through retirement in January 2023 will allow us to sustain the reforms we have implemented. The new faculty member will assume a much-needed leadership role within the Math Pathways program; more specifically, they will review (and revise as needed) materials for one or more courses within Math Pathways, work with other faculty to build new courses and materials (including those for support courses), train new part-time faculty to teach in the student-centered classroom within those courses, and generally help us to improve and expand Math Pathways.

Collaborating with faculty across the college takes time and energy. Math Department faculty are eager to work with Career Education (CE) faculty to offer the new Math 121 course that more closely aligns with CE courses. In addition, faculty in the Math and Business Departments would like to develop and implement contextualized curriculum and classroom materials for Math 178, Business Calculus. Continuing to work with the Psychology Department to increase enrollments in the Math 060 as a corequisite support course for PSY 215 is also a priority. Updating the PreCalculus materials for Canvas as well as developing material for the Calculus sequence are a priority. This will require working with the Physics and Engineering programs to ensure our courses are up to date.

These collaborations are critical to the success of the Math Pathways program and directly support both Math Department goals. In addition, this work cannot be done without at the very least maintaining the number of full-time faculty.

Q3

2. Which strategic priority/priorities is this request supporting. Please state how the position will help advance the specific priority/priorities and the College's mission. (Rubric Criterion 4) Acceleration Guided Student Pathways Student Validation and Engagement Organizational Health (300 words or less)

The strategic priority this request supports is Acceleration. By implementing bold structural changes to its basic skills program coupled with pedagogical reforms and intensive ongoing professional development, the Math Pathways program has substantially increased the proportion of incoming students who enroll in and successfully complete a transferable math class in just one term. These reforms eliminated any gap in access to transfer-level math courses for both Latinx and African American students as well as the success rates performance gap for Latinx students. In addition, the success rates performance gap for African American students has been narrowed. Consequently, the department is removing a long-standing barrier to students' attainment of their educational goals.

The Department will be losing one full-time faculty member in January 2023 due to retirement. This person was one of the founding faculty critical in the reforms we have implemented. Hiring and training a full-time math instructor to lead in the Math Pathways program will enable the Department to sustain program outcomes to date, revise and improve recent reforms as needed, and work to completely close any performance gaps. The transition from part-time to full-time faculty is a process that takes time and training. Therefore, we need new faculty soon so we do not lose momentum.

Q4

3. How will this position improve student student learning and achievement, and close equity gaps in access and outcomes in your program. (Rubric Criterion 2) (300 words or less)

In fall 2021, 53% of our units are taught by full-time faculty. When we lose a full-time faculty member, this number will go down to approximately 45%. Our load cushion for fall 2020 is 6.48, our productivity in fall 2020 is 515.70, our fill rate in fall 2020 is 80%. In addition, Mathematics is the top discipline with respect to enrollments over the past 5 years with 58% more enrollments than the second enrolled discipline (26,075 vs 16,577). Math sees a large proportion of students coming through the college.

Research has shown that if you have faculty that look like your students, the students are more likely to be retained and to succeed. Based on the demographics of the Math Department, we need full-time faculty that looks like our students. Diversity is powerful; hiring more diverse faculty is important, and it has a great impact on our student population as it validates their social and cultural differences and experiences. This will in turn help with the retention and success of students.

With the research we have seen and a goal of closing those performance (equity) gaps, the Math Department needs to work harder to have a more diverse faculty teaching math. We have seen an increase in the diversity of our students in the STEM pipeline, but the success rates are still not on par. Having a more diverse faculty teaching math can help improve these success rates as our students start to believe they belong.

Q5

4. Has there been or is there any evidence to demonstrate that there will be an increase in demand for your programs and/or services? How are students being adversely impacted without this position? Please discuss supporting data from recent semesters. For example, enrollment trends, waitlist pressures, or wait time for appointments and support services as they apply to this position. (Rubric Criterion 2)(300 words or less)

While the WSCH for the Math Department has continued to decline from a high in fall 2016, this goes in line with the overall decline in enrollment across the college. Our productivity (WSCH/FTEF) remains among the highest in the college at 515.70 along with our FTES/FTEF at 17.19. With these numbers and a fill rate of 80%, the Math Department continues to run a very efficient schedule.

Even with our load cushion declining and currently at 6.48, we need more diverse faculty. The only way to increase this diversity is to hire a full-time faculty member. It is essential that our faculty begin to look more like our students and this hire is critical to make this happen.

Add this to the fact that with the reform changes, the work in our department is more demanding than ever, which increases the need for a full-time math faculty to sustain the successes to date, increase growth rates, and improve the Math Pathways program.

Q6

5. What are the racial and gender demographics of the faculty within the program? What steps will your program take to ensure that the recruitment for this position will encourage/promote faculty diversity? (Rubric Criterion 1)(300 words or less)

The Math Department has 9 full-time faculty. The demographic breakdown is 4 male, 5 female, 1 Latinx, 1 Middle Eastern, 7 White. The department representation closely matches the students with respect to gender. However, the department's representation with respect to race and ethnicity does not come close to representing the students.

The Math Department is committed to continuing to increase the diversity of our faculty. To do this, we have already started recruiting more diverse part-time faculty, which will help grow the pipeline. However, we cannot wait for this completely and instead need to reach out to communities to recruit potential full-time faculty that better represent our students.

The department will recruit from listservs and other online platforms where diverse faculty are more represented. Such examples are through Umoja, PUENTE, SHPE (Society for Hispanic Professional Engineers), NSBE (National Society of Black Engineers), Lathisms (Mathematical community for Latinx and Hispanic professionals), and NAM (National Association of Mathematicians).

Q7

6. Describe why this position is essential to your program and/or service area. How has the lack of this position impacted your program and/or service area? What will be the impact to the program and/or service area if this position is not filled? (Rubric Criterion 1,3)(300 words or less)

The activity-based math classroom is a critical component of the Math Pathways program. Teaching and learning is tailored to fit small groups of students as they work through brains-on activities, and class-time is spent on collaborative work with just-in-time remediation (atypical pedagogy for math teachers). Additionally, we need to continue evolving classroom activities and lesson plans, for Quantitative Reasoning, one of the options for non-BSTEM majors, and the calculus sequence.

Math Department faculty are overextended; consequently, we have not been able to work with the Business Department, or update the calculus sequence. The Department needs to keep our number of full-time math faculty where we currently are to sustain the efforts we have put in to transform the department. This will ultimately help grow the Department and subsequently the College. If the position is not filled, the Math Pathways program will stagnate with no math faculty available to begin much of the required work that remains on the to-do list. The Department simply cannot address that to-do list with human resources declining.

Q8

7. Is this a new position, replacement for a retirement/upcoming retirement or replacement for internal promotion (faculty to administration), or replacement for other circumstances? (Rubric Criterion 3)(100 words or less)

This position is a replacement position for a Math faculty member who will retire in January 2023.

Q9

7. Please confirm that you have discussed this faculty position request with the Division Dean and that you understand that Division Deans will be providing feedback to help inform the prioritization process.

Yes, I have discussed this position request with the Division Dean