

## Basic Skills Funds Request

**Name of person or persons requesting funds:**

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**Proposal: Math Tutors for Fall 2018, Winter 2018, Spring 2019, Summer 2019**

**1. Write a one or two paragraph summary (approximately 200 words) of your proposal and how it will contribute to increased student success in Basic Skills classes at Imperial Valley College. Basic Skills classes are ESL, Math below Math 91, and English below English 110.**

For students who are still in developmental-level math when beginning their college careers, it is critical that supplemental help outside of the classroom (such as tutoring) be made available to them at times that is convenient for our students. This is especially true during accelerated sessions such as the winter and summer sessions, in which the rapid pace intensifies the difficulty for students who already struggle with the subject matter. Students take advantage of, and benefit from, the free tutoring services that are offered to them at the Math Lab during the regular fall and spring semesters. However, the district money is not sufficient to hire enough tutors to serve our students. Further, winter and summer sessions are not funded by the district. In the interest of increasing student success at Imperial Valley College, it is vital for the Math Lab to be able to continue to offer its free tutoring services to basic skills math students. In the transfer level math courses, student difficulties are usually pre-transfer topics.

For the academic year 18-19 including the winter and summer sessions, the math department is offering 71 and 73 sessions for the fall and spring respectively, and 14 and 15 courses in the winter and summer. Of these courses, 37 and 39 are pre-transfer courses for the fall and spring, respectively. Table 1 illustrates the unduplicated head count of students who attended the Math Lab during each semester.

| Term        | Total Hours | Unduplicated Students | Total visits |
|-------------|-------------|-----------------------|--------------|
| Summer 2017 | 1650        | 208                   | 958          |
| Fall 2017   | 10,475      | 997                   | 6,048        |
| Winter 2018 | 2,672       | 298                   | 1,759        |
| Spring 2018 | 10,612      | 1041                  | 6,439        |

Table 2 is a sample of the success and retention of students who utilize the Math Lab verses those who do not.

Table 2: Success and Retention Rates, Mathematics

| Pre-transfer Mathematics   |         |           |             |                          |         |           |             |
|----------------------------|---------|-----------|-------------|--------------------------|---------|-----------|-------------|
| Utilitized Math Lab        |         |           |             | Did Not Utilize Math Lab |         |           |             |
| Term                       | Course  | Success % | Retention % | Term                     | Course  | Success % | Retention % |
| Summer 2017                | MATH061 | 95.00%    | 100.00%     | Summer 2017              | MATH061 | 93.48%    | 100.00%     |
| Summer 2017                | MATH071 | 88.89%    | 100.00%     | Summer 2017              | MATH071 | 78.00%    | 90.00%      |
| Summer 2017                | MATH081 | 81.25%    | 87.50%      | Summer 2017              | MATH081 | 78.69%    | 96.72%      |
| Fall 2017                  | MATH061 | 76.27%    | 98.31%      | Fall 2017                | MATH061 | 67.84%    | 89.77%      |
| Fall 2017                  | MATH071 | 80.65%    | 98.39%      | Fall 2017                | MATH071 | 71.59%    | 94.32%      |
| Fall 2017                  | MATH081 | 55.91%    | 88.71%      | Fall 2017                | MATH081 | 53.94%    | 83.86%      |
| Winter 2018                | MATH061 | 79.49%    | 84.62%      | Winter 2018              | MATH061 | 77.78%    | 96.30%      |
| Winter 2018                | MATH071 | 66.67%    | 100.00%     | Winter 2018              | MATH071 | 82.86%    | 94.29%      |
| Winter 2018                | MATH081 | 78.00%    | 86.00%      | Winter 2018              | MATH081 | 91.43%    | 91.43%      |
| Spring 2018                | MATH061 | 67.24%    | 89.66%      | Spring 2018              | MATH061 | 53.13%    | 82.42%      |
| Spring 2018                | MATH071 | 82.67%    | 96.00%      | Spring 2018              | MATH071 | 68.59%    | 87.43%      |
| Spring 2018                | MATH081 | 51.06%    | 90.43%      | Spring 2018              | MATH081 | 56.87%    | 74.41%      |
| Transitional Mathematics   |         |           |             |                          |         |           |             |
| Utilitized Math Lab        |         |           |             | Did Not Utilize Math Lab |         |           |             |
| Term                       | Course  | Success % | Retention % | Term                     | Course  | Success % | Retention % |
| Summer 2017                | MATH091 | 83.33%    | 91.67%      | Summer 2017              | MATH091 | 77.61%    | 91.04%      |
| Fall 2017                  | MATH091 | 72.97%    | 94.59%      | Fall 2017                | MATH091 | 58.65%    | 85.38%      |
| Winter 2018                | MATH091 | 86.54%    | 94.23%      | Winter 2018              | MATH091 | 75.53%    | 90.43%      |
| Spring 2018                | MATH091 | 58.96%    | 87.86%      | Spring 2018              | MATH091 | 47.95%    | 77.19%      |
| Transfer Level Mathematics |         |           |             |                          |         |           |             |
| Utilitized Math Lab        |         |           |             | Did Not Utilize Math Lab |         |           |             |
| Term                       | Course  | Success % | Retention % | Term                     | Course  | Success % | Retention % |
| Summer 2017                | MATH119 | 100.00%   | 100.00%     | Summer 2017              | MATH119 | 72.46%    | 88.41%      |
| Summer 2017                | MATH140 | 80.00%    | 100.00%     | Summer 2017              | MATH140 | 63.64%    | 63.64%      |
| Summer 2017                | MATH190 | 76.92%    | 92.31%      | Summer 2017              | MATH190 | 77.27%    | 95.45%      |
| Fall 2017                  | MATH110 | 50.00%    | 92.31%      | Fall 2017                | MATH110 | 54.90%    | 78.43%      |
| Fall 2017                  | MATH112 | 63.64%    | 100.00%     | Fall 2017                | MATH112 | 60.00%    | 80.00%      |
| Fall 2017                  | MATH114 | 90.91%    | 100.00%     | Fall 2017                | MATH114 | 94.29%    | 100.00%     |
| Fall 2017                  | MATH119 | 69.15%    | 91.49%      | Fall 2017                | MATH119 | 72.29%    | 87.01%      |
| Fall 2017                  | MATH140 | 47.22%    | 72.22%      | Fall 2017                | MATH140 | 50.82%    | 73.77%      |
| Fall 2017                  | MATH150 | 35.71%    | 92.86%      | Fall 2017                | MATH150 | 47.37%    | 84.21%      |
| Fall 2017                  | MATH190 | 56.25%    | 93.75%      | Fall 2017                | MATH190 | 51.02%    | 81.63%      |
| Fall 2017                  | MATH192 | 42.86%    | 57.14%      | Fall 2017                | MATH192 | 51.16%    | 69.77%      |
| Fall 2017                  | MATH194 | 90.00%    | 97.50%      | Fall 2017                | MATH194 | 45.45%    | 81.82%      |
| Fall 2017                  | MATH210 | 81.25%    | 100.00%     | Fall 2017                | MATH210 | 66.67%    | 100.00%     |
| Fall 2017                  | MATH230 | 77.42%    | 90.32%      | Fall 2017                | MATH230 | 66.67%    | 91.67%      |
| Fall 2017                  | MATH240 | 86.67%    | 100.00%     | Fall 2017                | MATH240 | 42.86%    | 85.71%      |
| Fall 2017                  | MATH241 | 97.14%    | 97.14%      | Winter 2018              | MATH119 | 70.00%    | 84.29%      |
| Winter 2018                | MATH119 | 89.09%    | 98.18%      | Winter 2018              | MATH140 | 53.13%    | 71.88%      |
| Winter 2018                | MATH140 | 83.33%    | 100.00%     | Spring 2018              | MATH110 | 54.90%    | 70.59%      |
| Spring 2018                | MATH110 | 62.86%    | 91.43%      | Spring 2018              | MATH112 | 72.41%    | 93.10%      |
| Spring 2018                | MATH112 | 66.67%    | 100.00%     | Spring 2018              | MATH114 | 96.97%    | 96.97%      |
| Spring 2018                | MATH114 | 90.91%    | 90.91%      | Spring 2018              | MATH119 | 61.08%    | 80.24%      |
| Spring 2018                | MATH119 | 81.75%    | 92.70%      | Spring 2018              | MATH122 | 61.54%    | 84.62%      |
| Spring 2018                | MATH140 | 55.56%    | 73.02%      | Spring 2018              | MATH140 | 32.65%    | 57.14%      |
| Spring 2018                | MATH150 | 64.29%    | 78.57%      | Spring 2018              | MATH150 | 38.24%    | 64.71%      |
| Spring 2018                | MATH170 | 91.67%    | 100.00%     | Spring 2018              | MATH170 | 57.14%    | 100.00%     |
| Spring 2018                | MATH190 | 69.44%    | 91.67%      | Spring 2018              | MATH190 | 71.43%    | 95.24%      |
| Spring 2018                | MATH192 | 76.19%    | 92.86%      | Spring 2018              | MATH192 | 57.14%    | 76.19%      |
| Spring 2018                | MATH194 | 40.91%    | 72.73%      | Spring 2018              | MATH194 | 27.78%    | 61.11%      |
| Spring 2018                | MATH210 | 67.74%    | 77.42%      | Spring 2018              | MATH210 | 78.95%    | 89.47%      |
| Spring 2018                | MATH220 | 73.68%    | 84.21%      | Spring 2018              | MATH220 | 93.33%    | 93.33%      |

The Math Lab serves many students. It is essential students has access to tutors at times that are convenient for them. In both Math 61 and Math 71, around 10% more students were successful in the courses if they made use of the resources offered at the Math Lab. Retention rates were also significantly improved. For transitional math, the success rate was nearly 15% more for the students who used the Math Lab as compared to those who did not. Students in transfer level mathematics are lacking the developmental skills to succeed. Students do not fail Calculus I, students enrolled in Calculus I do not know how to simplify rational expressions, which is a Beginning Algebra (Math 81) topic. Also, the retention rate of students in transfer level math was about 17% higher for students who utilized Math Lab services versus those who did not. The proposed funding would allow the Math Lab to hire 4 tutors to work 15 to 20 hours per week for the remaining 14 weeks of Fall 2018, 5 weeks of Winter 2019, 16 weeks of Spring 2019 and 6 weeks during the Summer 2019 session. The Math Lab was in the process of relocating Summer 2018, so accurate data of student visits was not attainable. This data is from Summer 2017 due to the transition in 2018 and the Math Lab was not able to keep accurate data during the move.

**2. Include a timeline or flow chart that indicates approximately when activities will occur.**

|                        |  |
|------------------------|--|
| August 27 - 31         | Summer session math tutors selected from current tutor staff                 |
| August 27 - 31         | Train tutors and schedule tutors to work in the math lab                     |
| August 27 – December 7 | Ongoing tutor training and workshops for students                            |
| January 2 – February 1 | Ongoing tutor training and workshops for students                            |
| February 11 – June 7   | Ongoing tutor training and workshops for students                            |
| January 2019           | Evaluate student performance of students who utilized the lab in fall 2018   |
| March 2019             | Evaluate student performance of students who utilized the lab in winter 2019 |
| June 2018              | Evaluate student performance of students who utilized the lab in Spring 2019 |
| September 2019         | Evaluate student performance of students who utilized the lab in Summer 2019 |

**3. Include a budget, table, or chart that includes the items/materials/resources needed and approximate the costs for each. This may include money for hourly wages.**

| Fall 2018, Winter 2019, Spring 2019, Summer 2019 |                          |                |              |               |                 |
|--|--------------------------|----------------|--------------|---------------|-----------------|
| Period   | Tutor Wages (\$/hour)    | x hrs per week | x # of Weeks | x # of tutors | = Total Pay     |
| Aug 27 – Dec 5                                   | \$11 / hour              | 15 hours / wk  | 14 weeks     | 4 tutors      | \$12,320        |
| Jan 2 – Jan 31                                   | \$17 / hour              | 20 hours / wk  | 5 weeks      | 2 tutor       | \$3,400         |
| Jan 2 – Jan 31                                   | \$11 / hour              | 15 hours / wk  | 5 weeks      | 2 tutor       | \$1,650         |
| Feb 11 – June 7                                  | \$11 / hour              | 15 hours / wk  | 16 weeks     | 4 tutors      | \$10,560        |
| Jun 17 – July 25                                 | \$11 / hour              | 15 hours / wk  | 6 weeks      | 2 tutor       | \$1,980         |
| Jun 17 – July 25                                 | \$17 / hour              | 20 hours / wk  | 6 weeks      | 2 tutor       | \$4,080         |
|  |                          |                |              |               | \$33,990        |
|  | <b>Workers Comp/FICA</b> | <b>@7.245%</b> |              |               | \$2,643         |
|  |                          |                |              | <b>Total</b>  | <b>\$36,633</b> |

**4. Describe positive outcomes and proposed means to assess them.**

Increased access to tutoring help, particularly during accelerated sessions in which instructors do not have a lot of time for reviewing topics in the classroom, is essential to the success of students who struggle with math and place into developmental level courses upon assessment. Basic Skills math is an issue that affects a very substantial percentage of students at Imperial Valley College. Our institution's goal of encouraging students to complete their degree in 150% time (3 years) is especially difficult for students who must begin at three or four levels below transfer level in mathematics. It is therefore critical that we offer students the assistance they need in order to succeed, both inside the classroom and outside of it. Tutoring is an essential part of helping students reach their goals, and therefore it helps Imperial Valley College increase its overall success, persistence, and completion rates. The effectiveness of the tutoring will be assessed qualitatively through surveys that the students will fill out when they utilize the lab's services. The new Math Lab Coordinator will work closely with the teaching math faculty on creating supplemental materials for students to review with tutors in the Math Lab. In addition, data of the success rates of these students will be recorded, with a report submitted to the Basic Skills Committee in the fall of 2018.

**Submitted by:**

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**Jill Nelipovich Faculty, Mathematics**