

Justification for hiring Instructional Specialists for the Math Learning Center

What does the MLC do?

The Math Learning Center provides free drop-in tutoring support for students enrolled in math classes (including Statistics) and provides tutoring support for math skills necessary for success in other MPC courses. The MLC serves students in transfer, basic skills, and CTE classes and is open 40 hours per week (Monday – Thursday 9 – 6, Sunday 1 -5) on the main campus. The MLC is also open in Marina for 4 hours per week and is staffed by a math instructor. Students can use the MLC for as many hours per week as they want to. They come to the MLC to:

- get help with homework or projects
- study for exams
- work in groups with their classmates and consult with a tutor when necessary
- access the internet for online math classes
- get help with technology (calculators and software) used in math/science classes
- borrow textbooks and graphing calculators for use in the MLC

How is this different from what the Academic Support Center does?

The Academic Support Center (Coordinator: Marilyn Townsend, Assistant Coordinator: Linda Pridmore) provides scheduled one-on-one or small group tutoring for math students – subject to tutor availability. Their tutors are student helpers who provide tutoring for specific courses within their comfort zone. A math student tutor may, for example, only be scheduled to tutor algebra students. Students are allowed a **maximum of 2 hours per week of pre-scheduled tutoring** for a course. Tutoring must be scheduled between 8:00 and 6:00 Monday through Thursday or 8:00 and 2:00 on Fridays. Late afternoon and early evening time slots are rare. Students work with the same tutor at each session for a full hour and, therefore, are able to get in-depth help with the course material. If a tutor is not available for a particular course, then students are unable to get help through the Academic Support Center.

Statistics is one of the math courses with the highest total enrollment each semester, but there is little to no Statistics help available through the Academic Support Center due to lack of tutor availability (most students who take Statistics transfer shortly thereafter and/or are not able to effectively tutor the subject).

Students enrolled in **CTE** (nursing, auto tech, etc.) courses do not usually get tutoring through the Academic Support Center, but are able to go to the MLC when their course covers a topic

requiring math skills. Students taking evening or online courses are sometimes not able to come to campus during the times the Academic Support Center is open and tutors are available, but they often can come to the MLC to use the computers and get help from MLC tutors during late afternoon/early evening hours (4 to 6) and/or Sunday afternoons (1 to 5).

The Academic Support Center does not offer workshops on specific topics, but the MLC will be able to develop and offer workshops when the Instructional Specialist positions are filled.

What is best for our students?

The Math Learning Center and Academic Support Center faculty and staff agree that for most students (particularly those in basic skills math classes) the best approach for supporting student success is to encourage students to use **both** programs. Ideally, a math student will work on math homework in the MLC throughout the week and also get in-depth help from an Academic Support Center tutor twice per week. A well-staffed MLC with evening and weekend hours of operation ensures access to math support for our evening and online students. Faculty and staff from both programs make every effort to ensure that all students are aware of the services provided by each of the programs and that students know how to obtain those services.

What resources does the MLC currently have?

- One full-time faculty MLC Coordinator (ongoing)
- 18 hours per week of faculty tutoring on main campus, 4 hours in Marina (ongoing)
- 40 hours per week of temp help provided by a grant through the BSI project (one-time funding, not expected to be available after Spring 2011)
- 20 hours per week of student help on the main campus, no student help in Marina (ongoing budget is \$7000 per year – this must be used for fall, spring, and summer)

What resources does the MLC need to have on an ongoing basis next year in order to adequately serve students?

- One full-time faculty MLC Coordinator (ongoing – no new funds requested)
- 18 hours per week of faculty tutoring on main campus, 4 hours in Marina (ongoing– no new funds requested)
- **60 hours of Instructional Specialist time per week** (we are requesting **three** 20 hour/wk positions, one to include 16 hours/wk during summer session - ongoing)

- 60 hours per week of student help for the main campus during fall/spring, 28 hours per week for summer (ongoing – we will continue to ask for this \$13,000 increase in budget through the action plan process)

This level of staffing will provide 40 hours of operation for the MLC with an instructor available at all times on the main campus. At the busiest times of day, two Instructional Specialists and at least one student helper will also be available to assist students. Our goal is to keep wait time reasonable for students (5 minutes maximum). Room capacity is currently approximately 25 and last semester the MLC *averaged* 14 students per hour. Room capacity will be closer to 50 in the new building. Without additional staffing we are likely to be facing a tutor to student ratio of 1:25 during the busiest hours. Under these conditions, even with the MLC staff members working at full speed, students will have to wait an extraordinarily long time to get any help. Last fall (before we were able to hire temp help with BSI money) we had a similar ratio with discouraging results. The instructors working in the MLC reported that, on several occasions, students had angry outbursts and left the room. During the busiest hours each day some students left without getting any questions answered because it was so crowded and there were so few tutors, while other students waited an hour just to ask one question.

In Spring 2010 we were able to schedule 40 hours per week of BSI funded temp time in addition to our student help hours. Faculty working in the MLC reported that wait time for getting help was noticeably improved (although still longer than ideal) and there were no reported angry outbursts or dramatic exits. We also saw a significant increase in the number of basic skills math students using the MLC (30% of students using the MLC were basic skills math students in Spring 2010, compared to an estimate of 14% in Fall 2008). Basic Skills students are often our most vulnerable students and are among the first to disappear from the MLC when it is understaffed. We are requesting 60 hours per week of Instructional Specialist time to further decrease wait time, allow for expansion of the MLC program in Marina, and ensure adequate access to learning support services for basic skills and Statistics students in the new building on the main campus.

How is an “Instructional Specialist” different from a “student helper” and why does the MLC need both?

The Instructional Specialist job description summary says: “Under general supervision, assist students in the acquisition and reinforcement of specific skills. Receive limited supervision within a broad framework of standard District policies and procedures. Perform varied instructional support services, in a classroom environment, to meet the needs of small groups

or individual students.” MLC Instructional Specialists will have a strong mathematics background (including Statistics) and substantial tutoring and/or teaching experience. Permanent Instructional Specialists will be able to build relationships and collaborate with math, science, and CTE faculty. They can provide specialized tutoring support in the MLC when needed (dimensional analysis and unit conversions for chemistry and nursing, chart reading for geology, working with formulas for auto tech, etc.). Workshops on a variety of topics (such as “using the graphing calculator”, “test-taking strategies”, “dealing with math anxiety”) will be developed and offered. Instructional Specialists will also serve as role models for student helpers and will assist the Coordinator with tutor training, mentoring, and supervision. As the mathematics offerings in Marina grow and the total number of students taking classes at the Marina site increases, an Instructional Specialist may be assigned to the Marina site part time in order to increase the available math support for students in Marina.

The following table compares some of the skills and expectations for Instructional Specialists and student helpers.

Instructional Specialist	Student Helper
requires limited supervision and can help with tutor training by serving as a role model	requires close supervision, especially during first semester as a tutor
works 20 hours per week, provides continuity from hour to hour and year to year	works a few hours per week, often in one-hour blocks squeezed in between classes and is usually not available to tutor for more than two semesters
is able to tutor Statistics	usually cannot tutor Statistics
has experience working with basic skills students and can use a variety of tutoring methods to assist students with different learning styles	may not have experience in tutoring basic skills students or working with students with different learning styles
will independently confer with instructors concerning programs and materials to meet student needs (from Inst. Spec. job description)	not expected to work directly with faculty other than MLC Coordinator or faculty MLC tutors
works collaboratively with Coordinator to develop and offer workshops on math related topics and is able to facilitate group-tutoring sessions when needed	works with one or two students at a time and primarily provides homework guidance
is an MPC employee, views the Instructional Specialist position as a long term part-time job (the job is a high priority), understands and is committed to the mission of the college	is primarily a student, is probably taking a full load of classes, preparing to transfer to a 4-year school, working at least one other job, and may cancel MLC tutoring hours when a paper is due or an important exam is approaching (the job is a low priority – out of necessity, not intent)

What does the MLC usage data look like?

The following table demonstrates significant recent program growth. With the move to a larger facility on the main campus this spring and to the permanent space in Marina next fall, the trend is expected to continue. Room capacity is currently a limiting factor, but will double when we move. Staffing is also a limiting factor and will become more of a problem once we move to the larger space. Without additional staffing, the program will be unable to meet student demand for help with math.

	Total students enrolled	Total student hours	Avg. student hours per week	MLC weekly hours of operation
Fall 2008	386	6174	385	46 Monterey 4 Marina
Fall 2009	405	7357	460	40 Monterey 4 Marina
Spring 2010	455	8879	555	40 Monterey 4 Marina
Fall 2010 (as of 9/29 approx 5.5 weeks)	464 (so far...)	3047	554	40 Monterey 4 Marina

The MLC Coordinator became a full time position in Fall 2008. We have seen a **44% increase in usage** while experiencing a **13% decrease in hours of Monterey campus operation**. Spring 2010 has the highest hourly average and was the semester in which the learning center was staffed with temp help from BSI for 40 hours per week. This semester we are still working out some staffing issues (our temp had to leave the country) and we expect the average to increase once our new temps are in place.

What will it cost to hire Instructional Specialists?

Two positions will be 20 hours per week, 34 weeks per year. One will be 20 hours per week, 34 weeks per year PLUS 16 hours per week for 7 weeks (to cover summer session). This is a total of 2152 hours of pay. According to Kali, the pay (including roll-up) is \$16.41 or \$17.44 hourly – for a total of **\$35,314.32 or \$37,530.88** depending on salary offered (there are currently two pay rates for Instructional Specialists – in a couple of years they will merge). I would suggest choosing the higher of the two rates in order to attract the most highly qualified candidates.

Does the MLC really help students?

Input from faculty, staff, and students supports our assertion that the availability of tutors in the MLC directly impacts success and retention rates in our math and science courses. We have not done a statistical study to verify this, but I asked students to give me some informal feedback about the MLC – here are a few quotes:

- “I will not pass math without this lab”
- “Without the Math Learning Center I would not have been able to succeed as well as I have”
- “One hour in the Math Learning Center is better than five hours studying on my own”
- “In class we go over a whole chapter and I need the tutors in the lab for the extra help to understand it in a pace I understand”
- “I struggle everyday with Statistics and come here to the math lab 3-4 hours a day and I still need help”
- “Without this math lab, I would have to hire a tutor I can’t afford. Not only would my grade suffer, but my true understanding of math application would suffer too.”

Now that we have a full-time MLC Coordinator, we can begin designing and implementing a continuous improvement process that includes collecting data and analyzing success and retention rates for students using the MLC. This will be done in cooperation with the Office of Institutional Research. The immediate priorities of the MLC program are (1) to achieve adequate staffing levels to ensure that students are able to get the help they need and (2) to plan for the Spring 2011 move to the new facility. During this academic year, we are collecting usage data. Next year we should be able to start making semester-to-semester comparisons and looking for trends.

We have Instructional Specialists helping students in many other areas (Business Skills, ESSC, Reading Center, Fitness Center, Trio, Supportive Services, and Library). Our math students deserve to have an adequately staffed Math Learning Center and the high-quality academic support that can be provided by Instructional Specialists.