

PROGRAM REVIEW

MATHEMATICS

COMPTON CENTER

2010-11

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I. Overview

Description of Program

Successful completion of courses in mathematics at the El Camino College Compton Center enables students to satisfy the mathematics requirements for their basic skills, transfer, or vocational program. .

Students are initially placed in the appropriate level of mathematics based on an evaluation of their transcript or by taking a placement test.

Our goal in the mathematics program is to provide the foundation in mathematics that our students will need, regardless of their background in mathematics, to pursue their program of study, be it academic or vocational.

Our mathematics program addresses core competencies that all students studying mathematics must acquire, namely: content knowledge; critical, creative and analytical thinking; communication and comprehension; professional and personal growth; community and collaboration; and information and technology literacy.

Students taking math courses at the Center are 68% female, 53 % African-American, 37% Latino; the largest age groups are 30-30 (14.1%) and 25-29 (13.6%). 39% are full-time students, 81% take their classes in the daytime. 81% are high school graduates, with 4% holding an associates' or higher degree.

To obtain an associate degree a student must pass the mathematics competency test, which covers intermediate algebra, or satisfactorily complete an approved course equivalent to intermediate algebra or higher.

Math Courses

Basic Skills

Course	Units	Title
Math 10A	2	Basic Arithmetic Skills, Part I
Math 10B	2	Basic Arithmetic Skills, Part II
Math 12	4	Basic Arithmetic Skills, Parts, I & II
Note: Math 12 is the same as	Math 10A & 10B	
Math 23	3	Pre-Algebra
Math 25	2	Pre-Algebra Review

Pre-Collegiate Courses

Math 33	3	Extended Elementary Algebra, Part I
Math 40	4	Elementary Algebra
Math 43	3	Extended Elementary Algebra, Part, II
Note: Math 40 is the same as	Math 33 & 43	
Math 60	4	Elementary Geometry
Math 73	5	Intermediate Algebra for General Education
Math 80	5	Intermediate Algebra for Science, Technology, Engineering, and Mathematics

Collegiate Math Courses

Math 110	3	Structures and Concepts in Mathematics
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Math 111	3	Mathematics for Elementary School Teachers—Geometry, Probability and Statistics
Math 120	3	Nature of Mathematics
Math 130	3	College Algebra
Math 140	4	Finite Mathematics for Business and Social Sciences
Math 150	4	Elementary Statistics with Probability
Math 160	4	Calculus I for the Biological, Management and Social Sciences
Math 161	3	Calculus II for the Biological, Management and Social Sciences
Math 170	3	Trigonometry
Math 180	5	Pre-Calculus
Math 190	5	Single Variable Calculus and Analytic Geometry I
Math 190	5	Single Variable Calculus and Analytic Geometry II
Math 220	5	Multi-Variable Calculus

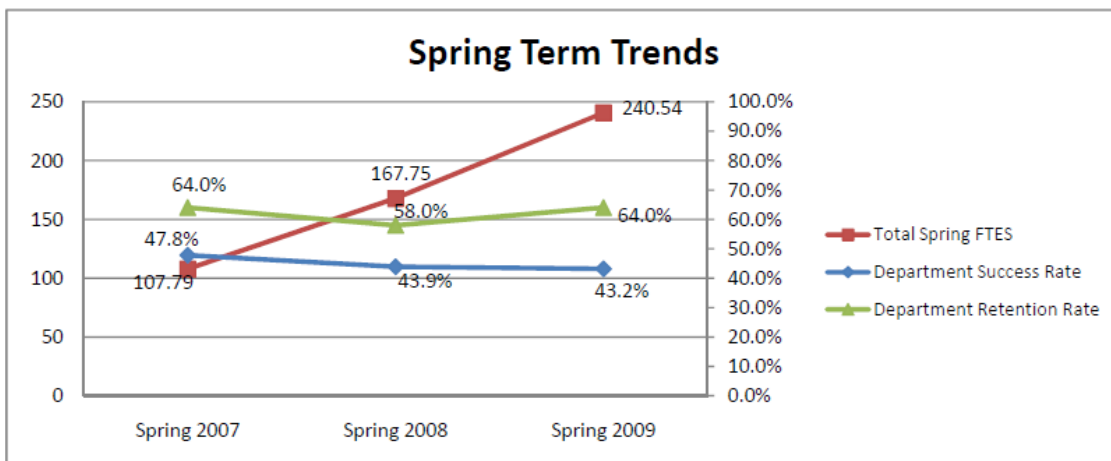
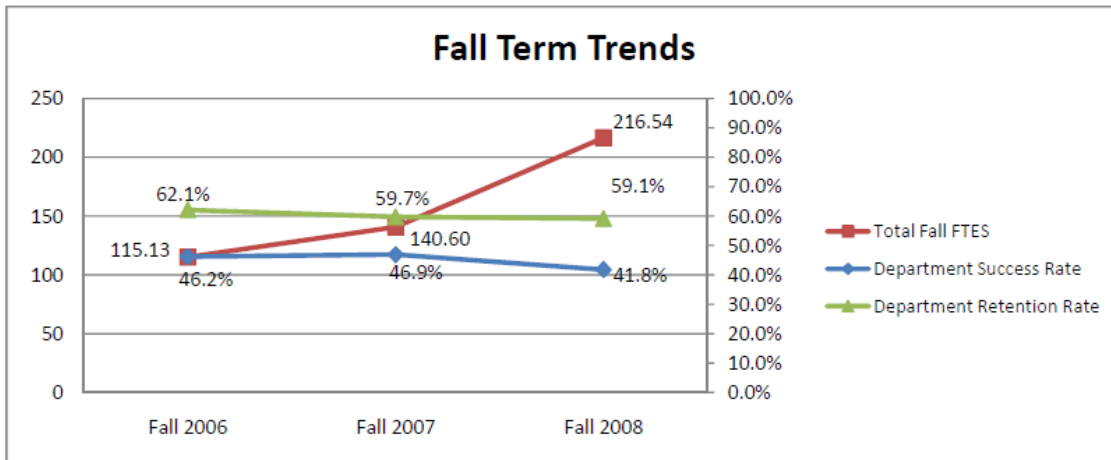
There is no previous recommendation for this section.

II. Program Statistics

A. Demand: FTES by Course/Program

EL CAMINO COLLEGE COMPTON CENTER
MATHEMATICS PROGRAM
FALL 2006 - SPRING 2009

Compton Educational Center - Mathematics Program	Fall 2006	Fall 2007	Fall 2008	Spring 2007	Spring 2008	Spring 2009
FTES						
<i>Resident</i>	108.59	133.34	205.30	101.63	155.04	224.59
<i>Nonresident</i>	6.54	7.26	11.24	6.16	12.71	15.95
Total FTES	115.13	140.60	216.54	107.79	167.75	240.54
Department Success Rate	46.2%	46.9%	41.8%	47.8%	43.9%	43.2%
Department Retention Rate	62.1%	59.7%	59.1%	64.0%	58.0%	64.0%



Demand for Math 12, 23, 40, 73, and 80 has steadily been increasing. Demand for 10A/10B, 25, 33, 43, 60, 110, 111, 130, 150, 170, 180, 190 and 191 is steady. Demand for 120, 140, 160 and 161 has declined. Math 220 is also being requested by students taking Math 191.

We have opened new sections of the courses in high demand to meet the demand, often adding new sections after the semester starts to meet the need. However, budgetary cuts and limitations of room space have begun to limit our ability to keep doing this. The classes with a steady demand have not seen a corresponding increase in number of sections offered. However, we still offer them as they are critical to prepare students for college level mathematics or their vocational programs. Courses in decline are not offered every semester, and only one section is offered when we do offer such courses. The growing demand for the calculus based physics sequence makes a regular offering of calculus imperative.

Recommendation:

With the negative impact the budget is having at this time, we cannot offer the same number of sections as before. The large number of sections of basic skills courses will need to be reduced to accommodate the collegiate level course offerings. Offer Math 120, and 140 in the fall term. Offer Math 160 in fall and summer. Offer Math 161 in the spring and summer. Offer Math 190 in the fall and Summer. Offer Math 191 in the spring and summer. Demand for Math 190 and 191 in the summer is steadily increasing. Demand for Math 220, the next course in the calculus sequence, is also growing and it should be offered in the summer.

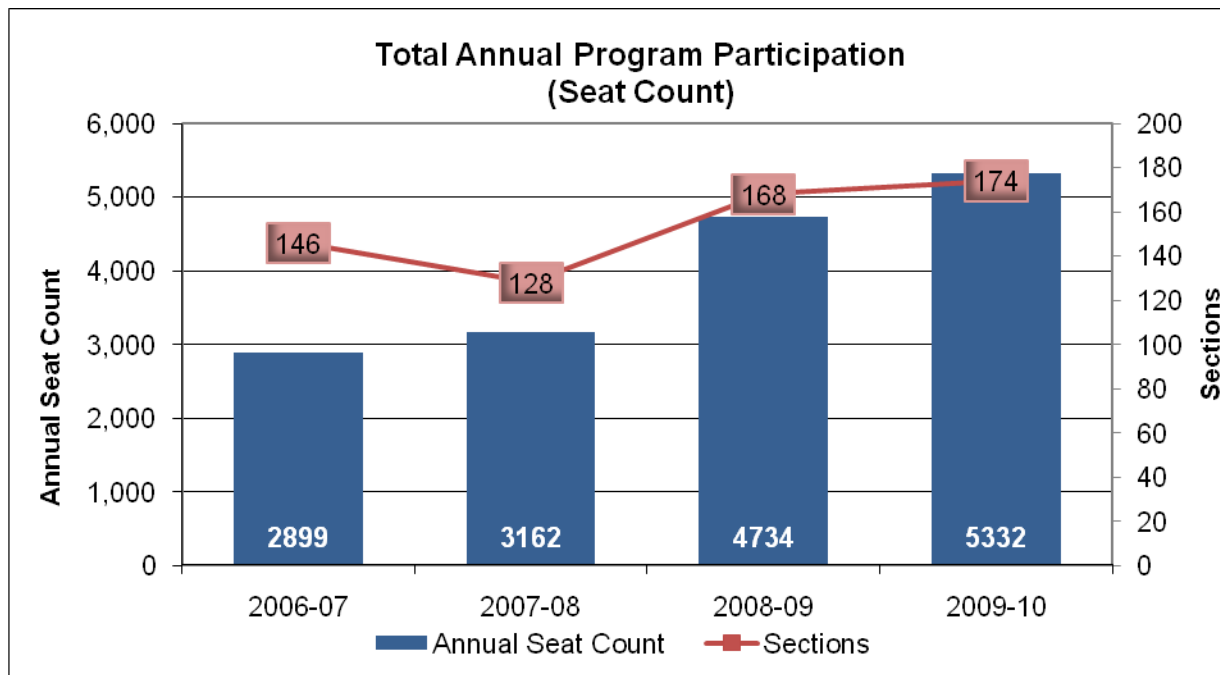
B. Offerings: Fill Rate

Total Annual Program Participation (4-year Trend)

Years: 2006-07 to 2009-10

Math- Compton

	2006-07	2007-08	2008-09	2009-10	4 Yr Average
Annual Seat Count	2899	3162	4734	5332	4032



Course, Section, Seat Counts
Years: 2006-07 to 2009-10

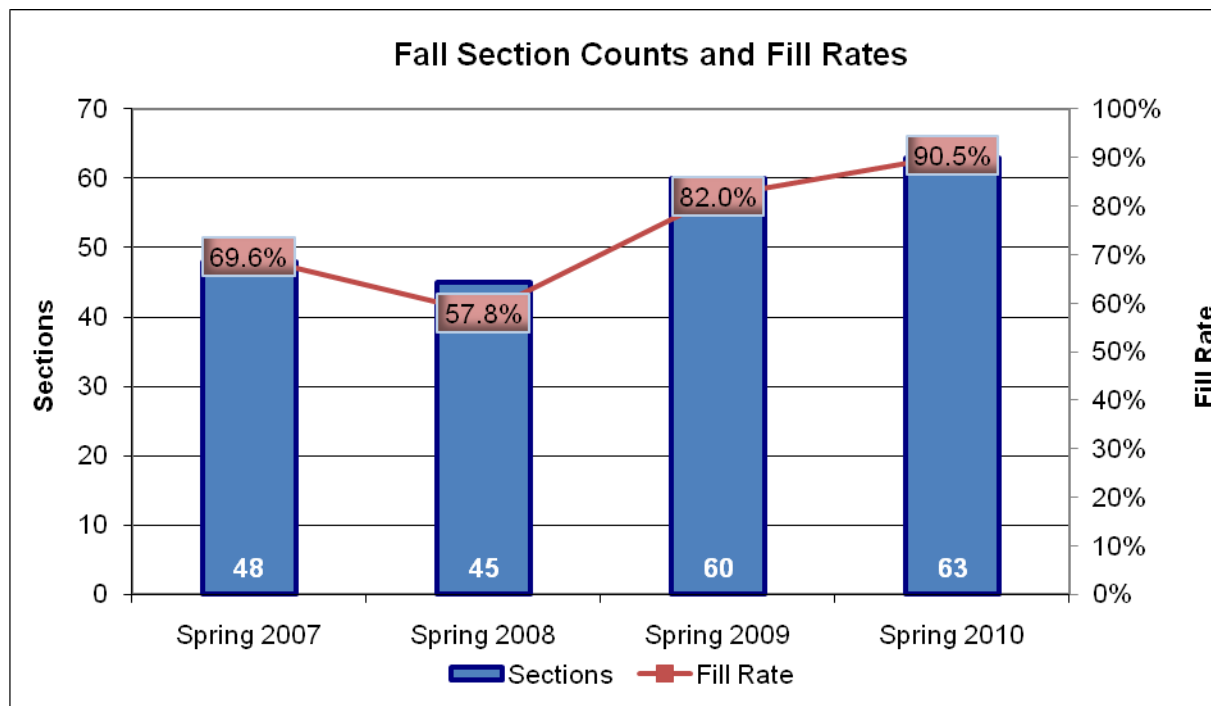
	2006-07	2007-08	2008-09	2009-10
Sections	146	128	168	174
Seats	2899	3162	4734	5332
Unduplicated Students	1959	2301	3405	3902
Seats/Unduplicated Students	1.5	1.4	1.4	1.4

Course Fill Rates

	Fall 2006	Fall 2007	Fall 2008	Fall 2009
	69.6%	57.8%	82.0%	90.5%

Course Fill Rates

	Spring 2007	Spring 2008	Spring 2009	Spring 2010
	69.6%	57.8%	82.0%	90.5%



The fill rate for math courses is steadily increasing. It was low in 07-08 when the fewest sections were offered in this cycle. Otherwise, there is a continually improving fill rate, now in excess of 90%. The program is clearly in growth mode.

We will have to be more judicious in opening new sections, particularly after the semester begins. Of course, the fiscal reality in the State makes this an obvious course of action anyway.

C. Scheduling: Student Satisfaction with Scheduling

CEC DATA BELOW:

FALL

Time of Classes*		FALL 06		FALL 07		FALL 08		FALL 09		TOTAL	
		n	%	n	%	n	%	n	%	n	%
		Daytime	776	85.2%	806	79.0%	1,252	78.7%	1,553	82.2%	4,642
Evening	135	14.8%	214	21.0%	338	21.3%	337	17.8%	1,660	24.5%	
Unknown	0	0.0%	0	0.0%	0	0.0%	0	0.0%	478	7.1%	

SPRING

Time of Classes*		SPRING 07		SPRING 08		SPRING 09		SPRING 10		TOTAL	
		n	%	n	%	n	%	n	%	n	%
		Daytime	669	79.3%	960	81.6%	1,313	75.8%	1,650	82.5%	4,642
Evening	175	20.7%	217	18.4%	419	24.2%	349	17.5%	1,660	24.5%	
Unknown	0	0.0%	0	0.0%	0	0.0%	0	0.0%	478	7.1%	

The questionnaire in appendix B was given out to 500 students in all levels of math classes concerning the scheduling of math classes. The scale for satisfaction is 1 to 10 with 10 being the category *Very Satisfied* and 1 being *Very Unsatisfied*. The results in the table below give the averages of the responses reported by the 481 students who participated in the survey.

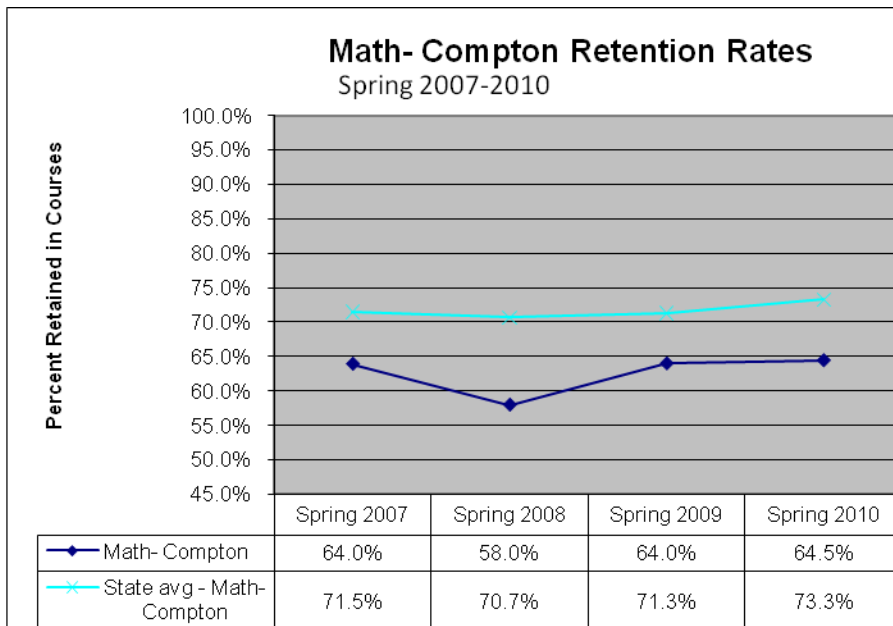
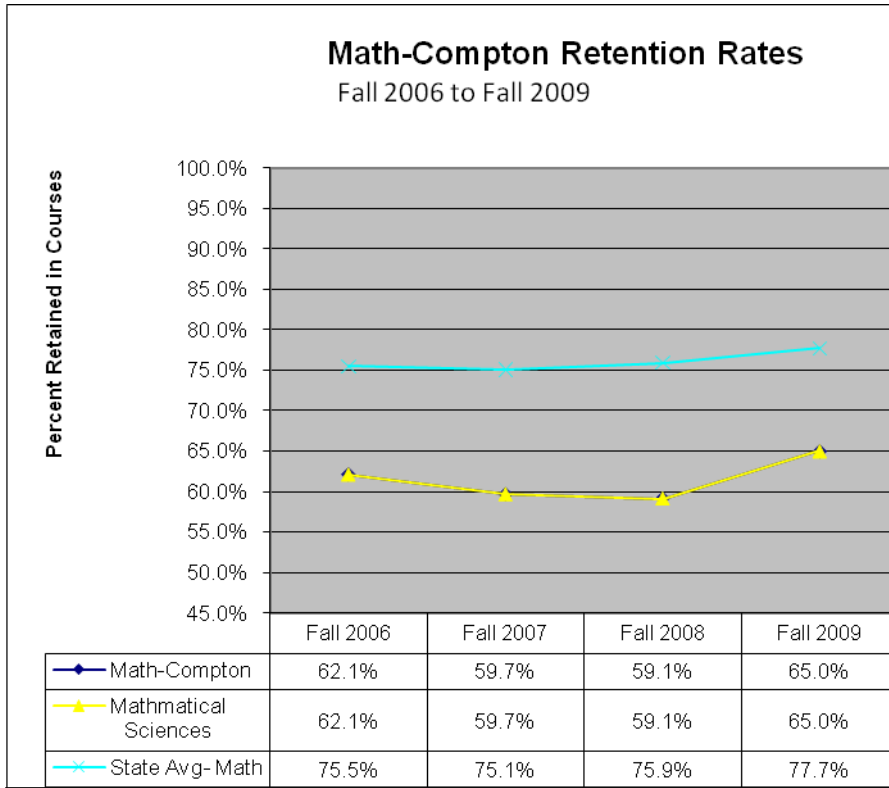
During the early morning before 10 am	During the late am/early pm 10am –1:55 pm	During the late afternoon 2 pm -4:25 pm	During the evening 4:30 & later	During the weekend	During the summer	During the winter	Via Online
8	8	7	7	5	8	8	7

Students are clearly very satisfied with our class schedule. There is an even split of opinion about the weekend. As funding becomes available this is one area that can be expanded. Math classes are offered throughout the day from 8am to 10pm MTWHF, and on the weekend. This accommodates all the possible times students can take a class.

D. Retention, Success, and Improvement

1. Retention

Retention is the percent of students who finish a class compared to the number enrolled as of census date.



Math- Compton Retention Rates

Spring 2007-2010	Spring 2007	Spring 2008	Spring 2009	Spring 2010
Math- Compton	64.0%	58.0%	64.0%	64.5%
State avg - Math- Compton	71.5%	70.7%	71.3%	73.3%

The retention rates are stable over time. Retention rates from Fall to Spring are statistically the same, with less than one point between the two averages. The retention rates for the college level math courses are higher than those of the basic skills and pre-collegiate level courses. The retention rates average 62%, roughly 10 points below the State average. The retention rates of the college level transfer math courses equal or exceed the state average.

Given the issues in the lives of our students, we feel that our retention rates are an encouraging statistic. Obviously, more can and should be done to assist students in their study of math. We have recently implemented the Supplemental Instruction program. This will improve retention and success rates in math, as more and more students avail themselves of this opportunity. Our entire tutoring program in the Learning Center needs to be expanded. Students still complain about having to wait to see a tutor. This delay hurts, as the lessons move right along according to schedule, and students then fall behind--one concept builds on the previous one.

It is critical that our computer lab be fully staffed and functional, with the latest software for student use. Students derive so much benefit from visiting the lab, where supplemental videos and computer software are available.

The math faculty at the Center, however, does not adhere to social promotion and other such artificial means to bolster retention, success and improvement rates. We believe in maintaining the academic rigor and integrity of our program. We know that our program here at the Center is sound. The quality of our students at the end of their Compton experience is reflected by their success in their pursuits upon leaving this institution. One of the doctors on our faculty is a product of the math program here at the Center. We have several physicians who have returned to thank us for the rigor of our academic program, as it prepared them for medical school. A truly independent statistic would be the percentage of university students from each college that eventually graduate with a university degree. This would provide a valid independent comparison of academic programs among the various colleges.

The importance of taking appropriate level math classes immediately, regular attendance and completion of homework, and taking the next level math course immediately after successful completion of the appropriate course, must be emphasized both in class and in student orientation.

The pendulum is again swinging in how to address the needs of the large number of students in non-collegiate math courses. The thinking years ago was to develop more modular courses to address the needs of our weaker students. Nearly all community colleges did this in the 80s and 90s. In fact, most still offer such math courses. In frustration with the still low retention, success and improvement rates of these students, the pendulum is now swinging back in the other direction: immerse students in the non-modular math courses, which we used to have in the early 80s. Regrettably, we feel, based on many years of experience, that going back to the old ways will produce the same old results. This is not a self-fulfilling prophecy but a reflection of many years of experience that gave rise to the modular courses in the first place. Hence we reiterate concrete steps we feel would truly benefit our students:

Recommendations:

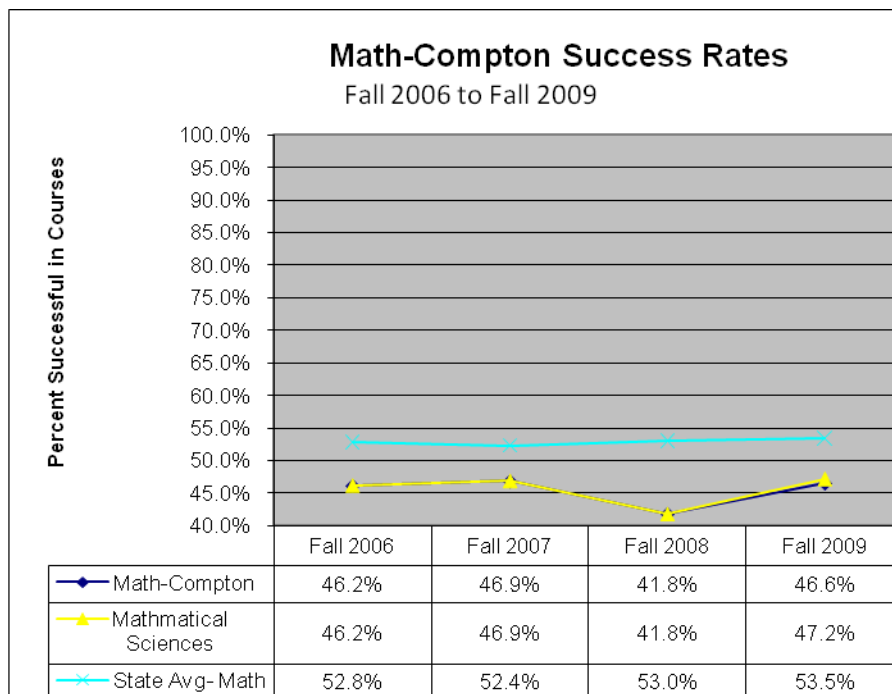
- Increase the supplemental instruction (SI) program and the tutoring program. Supplemental instruction offers some unique opportunities to math students. The need is greatest in the basic skills and pre-collegiate math courses. The fiscal constraints are negatively impacting this crucial area in our program. However, the number of S.I. coaches and tutors should be doubled. An additional \$20,000 needs to be spent to make this a reality.

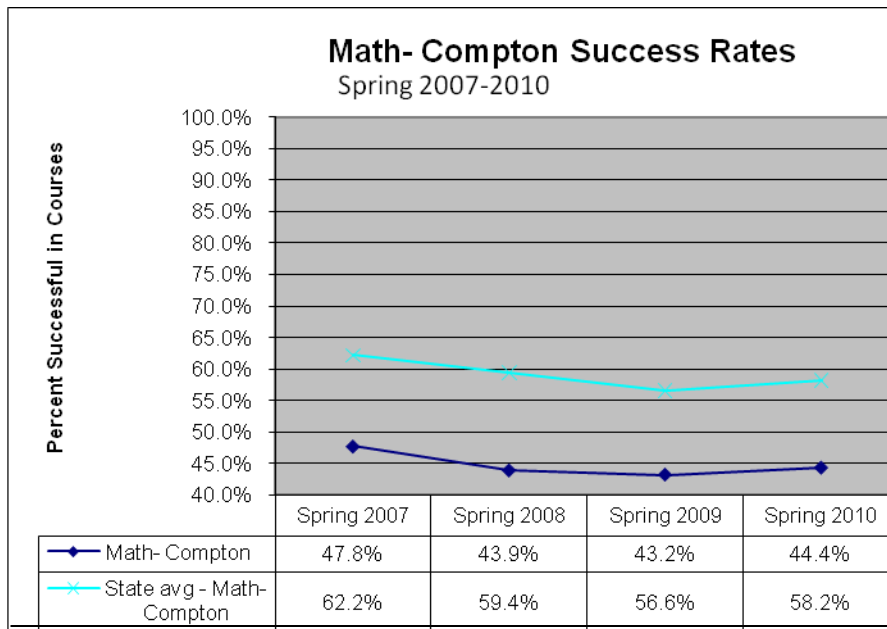
The supplemental instruction (SI) program offers the student the following goals:

- Get help from an SI Coach while studying with peers.
 - Review lecture notes and text material.
 - Take practice quizzes and tests.
 - Improve learning strategies.
 - Develop effective study strategies and habits.
 - Improve critical thinking skills.
 - Meet the instructor's expectations.
- Hire another math/science computer lab instructional assistant (\$40,000).
 - Fully equip the computer lab with the latest software and videos (\$15,000).
 - Establish a schedule to regularly upgrade the computers in the computer lab (\$10,000).

2. Success

Success rate is the percent of students who pass a class compared to the number enrolled as of census date.





Math- Compton Success Rates

Spring 2007-2010

	Spring 2007	Spring 2008	Spring 2009	Spring 2010
Math- Compton	47.8%	43.9%	43.2%	44.4%
State avg - Math- Compton	62.2%	59.4%	56.6%	58.2%

There is stability in our success rates over the three- year time frame.

Recommendation: See the above remarks about tutoring needs, the need to expand the supplemental instruction program, especially for the basic skills and pre-collegiate math courses, and the remarks about the math/science computer lab.

3. Improvement

Improvement is the number of students who pass the next course in a sequence after passing the earlier class in the sequence.

Improvement Rates

Students who Passed Math-10A&B/12 also Passed:

		Math-23/25	Math-40 or 33/43	Math-73/80
Math-10A/12	Fall 07	35%	12%	4%
	Spring 08	38%	12%	3%

Students who Passed Math-23/25 also Passed:

		Math-40 or 33/43	Math-73/80
Math-23/25	Fall 07	39%	14%
	Spring 08	39%	14%

Students who Passed Math-40/33&43 also Passed:

		Math-73/80	Transfer Level
Math-40/33	Fall 07	51%	25%
	Spring 08	38%	26%

Note: Each cohort was tracked for eight terms (Fall 07 - Summer 09 & Spring 08 - Winter 10)

As students progress through the math sequence from basic skills to pre-collegiate courses their improvement rates increase. Several factors can account for low improvement rates at the lower levels. We try to encourage students to take the next level math course as soon as possible. However, many are afraid of math and postpone taking their math classes until they are at the end of their program.

Recommendation: See the above remarks about tutoring needs, the need to expand the supplemental instruction program, especially for the basic skills and pre-collegiate math courses, and the remarks about the math/science computer lab.

III. Curriculum

A. Course and Content

1. Courses Not Offered

There are 24 courses (listed above) in the math program at CEC. All the courses in the program (except Math 220) have been offered in the last three years. However, some courses are not filling when offered and are frequently cancelled. We plan to begin offering Math 220 as demand is increasing for this course. The plan is to deactivate Math 10A and 10B. Our budget can no longer support offering these courses. Additionally, we should offer some courses only once a year.

2. Course Revisions and Additions

No course outlines need to be revised at this time. The course outlines of three courses were revised within the last year. Elementary Algebra courses, Math 41A and 41B are now Math 33 and 43 respectively. The units remain the same but students now have an extra hour in class each week for additional activities, more time on task. Intermediate Algebra, Math 70, is now Math 73 for General Education, and Math 80 for Science, Technology, Engineering and Mathematics majors. Our course offerings are consistent with current practice in the field. Fiscal constraints forbid adding new courses at this time.

Recommendations:

- Students enrolling in a class with supplemental instruction must adjust their schedule to accommodate this program. The 50 or 60 minute SI sessions *usually* take place right after the class ends. **It is imperative that during registration counselors mention to students that they need to leave a window of 30 to 60 minutes open in their schedules in order to be able to attend the SI sessions.** Enrolling a student in a class that has SI support without making time for the subsequent SI sessions will essentially void the intended benefit of SI. If a student does not want to leave time in their schedule for the SI sessions, then they should register into a non-SI supported class so that students who do intend to use SI support have the opportunity to do so.
- Data on participation rates in SI sessions, as well as correlation between SI participation and final course grades must be collected and analyzed.

B. Articulation

There is no course in our curriculum which is part of a lower division preparation for the major that is not articulated with our major transfer institutions. There is no recommendation at this time on articulation of our courses.

C. Instruction and Assessment

Student Learning Outcomes are utilized to evaluate the extent to which the learning objectives, skills, and competencies are being met.

a) Courses

We use the Student Learning Outcomes (SLOs) for our courses to do this evaluation.
We have completed the following course SLOs:

Math 10A (Spring 2010)

SLO: Student will be able to simplify an arithmetic expression correctly by using order of operations to identify and perform the operations in a step-by-step procedure.

Findings: The results are unsatisfactory. Only 32% of students passed the SLO. 36% of students who failed to pass the SLO passed the course with a grade of “C” or better. Students are therefore going on to the next level of math without mastering the order of operations. This is not satisfactory. This is reflected in the low correlation coefficient of 0.36 between SLO performance and grade earned in the course.

Implications: Greater emphasis needs to be placed on the order of operations in Math 10A.

Math 10B (Spring 2010)

SLO: Students will be able to convert numbers between the decimal form, the percentage form and the rational form, in any order.

Findings: The results are very encouraging. Students in Math 10B are able to fulfill the SLO: converting between decimals, fractions and percents.

Implications: We should continue the strategies being currently used with an eye for techniques to refine and improve the outcome.

Math 12 (Fall 2010)

SLO: Students will be able to perform conversions among different forms of numbers (decimal form, fractional form, percentage).

Findings: These results were disappointing. Even though 76% of the students who completed the course passed the course, they are having difficulty with this SLO. Only 46% passed the SLO, the majority (54%) failed.

Implications: We need to spend more time on this SLO in class, but also in homework assignments.

Math 23 (Fall 2010)

SLO: Students will be able to convert numbers between the decimal form, the percent form, and the rational form in any order.

Findings: These results are most encouraging. 87% of the students passed the SLO, with 75% of the students who completed the course passing the course. The average SLO score was 7.4 out of 10, the GPA is 2.6 for the Math 23 grades this semester. The correlation coefficient is 0.63. These students are excelling at this SLO.

Implications: We must maintain this level of performance; and seek to improve it.

Math 33 (Fall 2010)

SLO: Students will be able to use visual and graphical methods to represent and analyze information and to solve problems.

Findings: 77.4% of Math 33 students passed the SLO with excellent or satisfactory results, and 77.4% of students who completed the course passed the course. Students are meeting the SLO requirement for the course.

Implications: Maintain and seek to improve this level of performance.

Math 40 (Fall 2010)

SLO: Students will be able to use visual and graphical methods to represent and analyze information and to solve problems.

Findings: 79% of Math 40 students satisfied the SLO at the excellent or satisfactory level, with 70% of students who completed the course passing the course. These are very encouraging findings.

Implications: Maintain while seeking to improve this performance.

Math 43 (Fall 2010)

SLO: Students will be able to use visual and graphical methods to represent and analyze information and to solve problems.

Findings: Math 43 students have mastered this SLO. 94% did an excellent or satisfactory performance on this SLO.

Implications: Maintain this very high level of performance.

Math 73 (Fall 2010)

SLO: Students will be able to use visual and graphical methods to represent and analyze information and to solve problems.

Findings: 55% of students fulfilled the SLO requirement with an excellent or satisfactory performance, whereas 45 % needed improvement on the SLO. The SLO is being met. We must strive now for an even higher success rate.

Implications: Though successful, we must seek to improve the performance on this SLO. More emphasis must be placed on visual and graphical methods to represent and analyze information and to solve problems. We must assign more problems requiring this method of solution.

Math 80 (Fall 2010)

SLO: Students will be able to use visual and graphical methods to represent and analyze information and to solve problems.

Findings: 44% of students met the SLO, whereas 56% did not, even though 71% of those who completed the course successfully completed the course. Obviously Math 80 students are not meeting this SLO requirement: use of visual and graphical methods to represent and analyze information and to solve problems.

Implications: More emphasis on this needs to be made-assign more practice problems as well.

Math 130 (Fall 2010)

SLO: Students will be able to solve college algebra level application problems and use technology.

Findings: The majority of students (55%) scored 0 or 1; only 45% scored 2 or 3. More work needs to be done on this SLO- solving college algebra level application problems and using technology.

Implications: More emphasis needs to be placed on application problems and use of technology, and not just on the theory. This will be a challenge in terms of the volume of material to be covered and the limited class time in which to cover it. However, homework assignments and projects can be assigned to assist in this area.

b) Programs

We have completed three program SLOs in the developmental program—basic skills (Math 10A, 10B, 12, 23 and 25), precollegiate (Math 33, 40, 43, 60, 73 and 80), and College Math 2, CM2, college level math courses for general education and non-science majors (Math 120, 130, 140, 150, 160 and 161).

Basic Skills (Fall 2010)

SLO: Students will be able to convert numbers between the decimal form, the percent form, and the rational form in any order.

Findings: The average SLO pass rate was 66%, with 75% passing the course.

Implications: The SLO pass rate for Math 12 was only 46%. More time on task must be spent on conversions in Math 12. This need not only be done during class time, but can be achieved in the homework assignments in this area.

Precollegiate (Fall 2010)

SLO: A student completing Pre-Collegiate mathematics will use visual and graphical methods to represent and analyze information and to solve problems.

Findings: The average SLO pass rate was 70%, with 80% passing the course.

Implications: More work needs to be done on this SLO in Math 73 and 80 where the SLO pass rates were only 55% and 44% respectively. Graphing is a challenge to students, particularly when it goes beyond linear graphs. The graphs used in Math 73 and 80 were parabolas. More time on task needs to be spent here. More homework assignments in this area can be used to supplement classroom instruction.

College Math 2--CM2: College level math courses for general education and non-science majors (Fall 2010)

SLO: Students will be able to solve college level application problems and use technology.

Findings: The majority of students (55%) scored 0 or 1; only 45% scored 2 or 3. More work needs to be done on this SLO- solving college level application problems, and using technology.

Implications: More emphasis needs to be placed on application problems and use of technology, and not just on the theory. This will be a challenge in terms of the volume of material to be covered and the limited class time in which to cover it. However, homework assignments and

projects can be assigned to assist in this area.

Conclusion:

We use the results of the above evaluations to improve student learning and the quality of the math program. We discuss weaknesses that are identified and make an individual commitment to improve. Math faculty is encouraged to participate in professional development activities to enhance their instructional delivery.

Recommendation:

SLO assessment must be ongoing and should be done every semester.

IV. Program Requirements

A. Facilities and Equipment

Recommendations:

- Our overhead projectors and blackboxes frequently do not function or are out of focus and cannot be used. A weekly maintenance schedule needs to be put in place and implemented.
- The chalkboards need to be replaced with whiteboards. The chalk causes an ongoing problem with the HVAC system, making the classrooms either unbearably cold or hot.

B. Staffing

Full-time/Part-time and FTEF Data for CEC Math Department

	Fall 2010	Fall 2009	Fall 2008
Number of Full-time Faculty (head count)	10	10	10
Number of Part-time Faculty (head count)	23	11	8
Total Faculty	33	21	18
Full-Time FTEF	9.19	9.73	9.33
Part-Time FTEF	12.07	6.90	4.74
Total FTEF	21.26	16.63	14.07
Percentage Ratio			
FT% to PT% FTEF	43.2/56.8	58.5/41.5	66.3/33.1

Growth History and Productivity Data (for academic areas, from Teacher Load Summaries)

Weekly Census Classes	Fall 2010	Fall 2009	Fall 2008
Students	2103	1764	1379

WSCH	10,010	8048	6362
FTEF	18.00	14.6	12.6
FTES	312.7	251.4	198.7
% Seats Taken	93	92	83
# Sections	65	56	48
Adjusted WSCH/FTEF	494	490	449
FTES/FTEF	17.4	17.2	15.8
Daily Census Classes – Short-Term Classes	Fall 2010	Fall 2009	Fall 2008
Students	422	177	284
WSCH	2034	919	1235
FTEF	3.26	2.03	1.47
FTES	43.7	23.9	20.1
% Seats Taken	76.7	76.6	81
# Sections	16	7	10
Adjusted WSCH/FTEF	555	498	420
FTES/FTEF	13.4	11.95	13.7
Overall FTES for Department	356.4	275.3	218.9
Overall FTES/FTEF	16.8	16.6	15.6

Note: the FTES/FTEF ratio identifies the FTES generated per faculty member.

(Revenue per credit FTES for 2009-10 is \$4,565.) An FTEF that generates 18 FTES, for example, represents a position that accounts for \$82,170 in apportionment.

The FTEF, WSCH and FTES have steadily increased year by year over the last three years. The program is undergoing steady growth. The FT/PT ratio indicates that we need more full-time math instructors. This provided the rationale to hire three new full-time faculty in spring 2011.

We do have a faculty mentoring program. When a need arises a new instructor is assigned a mentor, an experienced tenured full-time instructor, who would pay classroom visits and advise the new instructor on techniques to improve the quality of instruction, and classroom management.

Our faculty remains current by attending professional development activities, the Faculty Inquiry Partnership Program (FIPP) being a case in point. Faculty also attends conferences.

Recommendation:

Administration should provide the resources and incentives for part-time faculty to participate in professional development activities. They play such an important role in our department and teach the majority of the courses offered--60% in Fall 2010.

C. Planning

One emphasis at the present time is in the area of SLOs. We with the ECC math faculty have jointly written the SLOs for the math courses we offer. CEC faculty has written the SLOs for those courses which are offered only at the Compton Center, namely Math 10A, Math 10B and Math 111. We are now in the process of assessment of the SLOs. This will be an ongoing activity.

Online instruction is also an expanding area in our program. Currently we offer three online courses in math. Our goal is to expand the online course offerings in mathematics. More faculty with the interest in online teaching need to be trained in this area.

Technology is an important component of mathematics. We need smart classrooms to provide the latest technology and software for our students. This is an ongoing need at our institution. Just maintaining the projection system in our classrooms is a constant challenge.

Our computer lab needs to be regularly updated with new computers and software. These require adequate funding, which is a struggle.

Data that track our students and are shared with the math faculty on a regular basis would help to identify those areas of strengths and weaknesses in the program.

The ever increasing cost of textbooks is a problem that has to be addressed. Students in our community are adversely affected by this trend. Greater financial support in terms of book grants, student loans etc. needs to be made. We are working with our textbook publishers to reduce the cost of our textbooks. We have been successful with a number of our texts and plan to expand the program.

Technological trends not only in our country but worldwide make the need for sound mathematical training essential. Math is playing an ever increasing role. To find a good job and in order to keep pace in the workplace will cause an ever increasing segment of our population to seek training in mathematics. The onus is on us to keep our curriculum current and relevant.

Faculty must stay abreast of the changes in society and the workplace in terms of the mathematical implications. Attendance at conferences should be encouraged and given financial support. This is one way to be aware of changes and have input on these changes.

It cannot be stressed too much that we need smart classrooms to stay abreast of what's already occurring. Our hybrid courses would benefit tremendously with computer stations available in the classroom for student use. Hands on demonstrations are effective. Purchase laptops which can be centrally stored and used in the classroom by instructors. An initial purchase of ten laptops (with the software) for an initial investment of \$15,000 would get us started. Internet access should be available in every classroom on campus.

Our faculty must be computer savvy. This is a trend that cannot be avoided. Students must be provided the tools they need to compete in our technological world. The computer lab can be an important venue for that, especially for the students without the financial means to provide their own equipment. Let's make the computer lab state of the art in terms of technology. For our faculty who teach the hybrid courses this is a must.

Recommendations:

- Establish smart classrooms. (\$15,000 each)
- Finance the attendance of full-time and part-time faculty at conferences and workshops for professional development. (\$5000 annually)

V. Conclusion

The math program at the Compton Center is a sound, stable component of the institution. It has dedicated faculty and staff. It generates substantial FTES for the Center. It always has had good articulation with neighboring colleges and universities. Our transfer level math courses have always been respected and accepted.

More can be done to strengthen our program. At present our success and retention rates for the transfer level math courses keep pace with the state averages. However, our rates in the pre-collegiate courses lag behind the state averages. Many factors contribute to this, including socio-economic factors.

Our district faces challenges that are unique, even when compared to institutions of similar demographics. For example, the school district in our community has its own challenges which affect the students that we serve. In July 1997, the ACLU and the attorneys for the Plaintiffs filed a class action lawsuit against the State Department of Education in the Los Angeles Superior Court. This lawsuit (Serna v Eastin, Case No. BC 174282) claimed that **the children attending public schools in the Compton Unified School District were deprived of basic educational opportunities that were available to children elsewhere in California.**

The judgment approving the Consent Decree in the above-entitled action was entered on February 7, 2000. The Consent Decree required continued improvement in the district's school facilities/sites and the classroom environment. Some of the specific areas of concern that required attention under the Consent Decree included the availability of certificated teachers in every classroom, the availability of appropriate textbooks and instructional materials for students to take home, the condition of student restrooms, the timely removal of litter and graffiti, and the repair/replacement of any faulty electrical wiring. Such factors highlight the yeoman's job that we do here in the math department at the Center. Another recent news headline from *December 8, 2010* was: Compton Parents Petition to Take Over Chronically Failing Public School Through 'Parent Trigger' Law, Send Shock Waves Throughout the Nation

Yet, there is much more that we can do for the students themselves and for the faculty and staff. So at this point we will reiterate our recommendations of ways to strengthen what we do here in mathematics at the Compton Center.

VI. Recommendations

1. Establish smart classrooms.(\$15,000 each)
2. MIS needs to monitor and adjust on a weekly basis the overhead projectors and blackboxes in each classroom in the Math/Science building.
3. Upgrade the computer lab. Equip it with the latest computer software and state of the art computers. Establish a schedule for the regular purchase of new computers for the computer lab (\$15,000).
4. Hire another full-time instructional assistant for the math/science computer lab so the late afternoon, evening, and weekend program can be adequately staffed as before (\$40,000).
5. Replace all chalkboards with whiteboards (\$10,000).
6. Increase the supplemental instruction program and the tutoring program. Supplemental instruction offers some unique opportunities to math students. The need is greatest in the basic skills and pre-collegiate math courses. (\$20,000)
7. Students enrolling in a class with supplemental instruction must adjust their schedule to accommodate this program. The 50 or 60 minute SI sessions *usually* take place right after the class ends. It is imperative that counselors mention to students that they need to leave a window of 30 to 60 minutes open in their schedules in order to be able to attend the SI sessions. Enrolling a student in a class that has SI support without making time for the subsequent SI sessions will essentially void the intended benefit of SI. If a student does not want to leave time in their schedule for the SI sessions, then they

should register into a non-SI supported class so that students who do intend to use SI support have the opportunity to do so.

8. Student Services needs to make book grants more readily and quickly available for students in need. The prices of books keep escalating. By the time the book grants are awarded several eligible students are already behind in their assignments, often too far behind to catch up.
9. Restrict the offering of Math 110, 120, 140 to the Fall term, Math 111 to the spring, Math 160 and 190 to fall and summer, Math 161 and 191 to spring and summer, and Math 220 to the summer. Only one section of Math 60, 170 and 180 should be offered each semester. A coordinated effort should be made with ECC to send students over to the Center when their sections are filled.
10. After the semester starts, only open new sections of a course when all sections are filled.
11. Finance the attendance of full-time and part-time faculty at conferences and workshops for professional development. (\$5000)
12. Part-time faculty should be encouraged to participate in professional development activities. They play such an important role in our department and teach the majority of the courses offered--60% in Fall 2010. (\$5000)
13. Provide a budget for office supplies for instruction. (\$5000)

VII. Appendix

A. Demographic and Enrollment Characteristics

Math-Compton Fall 2006 to Fall 2009

Characteristic	Category	Fall 2006		Fall 2007		Fall 2008		Fall 2009		Compton		Compton District	
		N	%	n	%	N	%	n	%	n	%	n	%
All Enrolled	Total	911	100.0%	1020	100.0%	1590	100.0%	1890	100.0%	6,780	100.0%	521,014	100.0%
Gender	Female	637	69.9%	697	68.3%	1042	65.5%	1275	67.5%	4,365	64.4%	265,196	50.9%
	Male	272	29.9%	322	31.6%	546	34.3%	615	32.5%	2,413	35.6%	255,818	49.1%
	Unknown	2	0.2%	1	0.1%	2	0.1%	0	0.0%	2	0.0%	0	0.0%
Ethnicity	African-American	467	51.3%	542	53.1%	863	54.3%	969	51.3%	3,247	47.9%	88,701	17.0%
	Amer. Ind. or Alaskan	2	0.2%	1	0.1%	3	0.2%	5	0.3%	13	0.2%	1,219	0.2%
	Asian	11	1.2%	27	2.6%	55	3.5%	55	2.9%	477	7.0%	58,779	11.3%
	Latino	371	40.7%	366	35.9%	543	34.2%	679	35.9%	2,303	34.0%	157,138	30.2%
	Pacific Islander	8	0.9%	22	2.2%	28	1.8%	30	1.6%	66	1.0%	2,061	0.4%
	White	9	1.0%	16	1.6%	26	1.6%	41	2.2%	229	3.4%	197,570	38.0%
	Unknown or Decline	43	4.7%	46	4.5%	72	4.5%	93	4.9%	445	6.6%	14,908	2.9%
Age/Age Group	Under 17	29	3.2%	13	1.3%	16	1.0%	7	0.4%	394	5.8%	139,140	26.7%
	17	51	5.6%	42	4.1%	53	3.3%	51	2.7%	206	3.0%		
	18	89	9.8%	154	15.1%	218	13.7%	245	13.0%	505	7.4%	11,840	2.3%
	19	93	10.2%	111	10.9%	208	13.1%	234	12.4%	597	8.8%		
	20	80	8.8%	90	8.8%	130	8.2%	215	11.4%	575	8.5%	5,996	1.2%
	21	59	6.5%	66	6.5%	98	6.2%	125	6.6%	440	6.5%	5,720	1.1%
	22	61	6.7%	61	6.0%	78	4.9%	104	5.5%	374	5.5%	20,233	3.9%
	23	39	4.3%	49	4.8%	64	4.0%	76	4.0%	291	4.3%		
	24	25	2.7%	32	3.1%	83	5.2%	81	4.3%	315	4.6%		
	25-29	120	13.2%	133	13.0%	231	14.5%	258	13.7%	973	14.4%	43,779	8.4%
	30-39	138	15.1%	148	14.5%	204	12.8%	263	13.9%	1,115	16.4%	97,447	18.7%
	40-49	96	10.5%	85	8.3%	145	9.1%	157	8.3%	686	10.1%	80,126	15.4%
	50-64	27	3.0%	34	3.3%	60	3.8%	73	3.9%	286	4.2%	69,852	13.4%

	65+	4	0.4%	2	0.2%	2	0.1%	1	0.1%	23	0.3%	46,878	9.0%
Class Load	Full-time	319	35.0%	428	42.0%	567	35.7%	780	41.3%	1,469	21.7%		
	Part-time	545	59.8%	549	53.8%	922	58.0%	1087	57.5%	4,668	68.8%		
	Not enrolled or N/A	47	5.2%	43	4.2%	101	6.4%	23	1.2%	643	9.5%		
Time of Classes*	Daytime	776	85.2%	806	79.0%	1,252	78.7%	1,553	82.2%	4,642	68.5%		
	Evening	135	14.8%	214	21.0%	338	21.3%	337	17.8%	1,660	24.5%		
	Unknown	0	0.0%	0	0.0%	0	0.0%	0	0.0%	478	7.1%		
Academic Level	AA or Higher	36	4.0%	37	3.6%	79	5.0%	65	3.4%	647	9.5%		
	HS Graduate	721	79.1%	807	79.1%	1,295	81.4%	1,611	85.2%	4,901	72.3%		
	Not a HS Grad	33	3.6%	53	5.2%	107	6.7%	137	7.2%	469	6.9%		
	K-12 Special Admit	67	7.4%	43	4.2%	48	3.0%	22	1.2%	573	8.5%		
	Unknown	54	5.9%	80	7.8%	61	3.8%	55	2.9%	190	2.8%		
Educational Goal	Intend to Transfer	456	50.1%	452	44.3%	628	39.5%	685	36.2%	2,223	32.8%		
	Degree/Certif. Only	68	7.5%	99	9.7%	99	6.2%	177	9.4%	632	9.3%		
	Retrain/recertif.	46	5.0%	54	5.3%	54	3.4%	107	5.7%	479	7.1%		
	Basic Skills/GED	62	6.8%	68	6.7%	68	4.3%	133	7.0%	528	7.8%		
	Enrichment	30	3.3%	32	3.1%	32	2.0%	63	3.3%	243	3.6%		
	Undecided	243	26.7%	181	17.7%	181	11.4%	287	15.2%	1,157	17.1%		
	Unknown	6	0.7%	134	13.1%	134	8.4%	438	23.2%	1,518	22.4%		

**Math- Compton
Spring 2007-2010**

Characteristic	Category	Spring 2007		Spring 2008		Spring 2009		Spring 2010		Compton		Compton District	
		N	%	n	%	N	%	n	%	n	%	n	%
All Enrolled	Total	844	100.0%	1177	100.0%	1732	100.0%	1999	100.0%	6,780	100.0%	521,014	100.0%
Gender	Female	610	72.3%	796	67.6%	1148	66.3%	1329	66.5%	4,365	64.4%	265,196	50.9%
	Male	231	27.4%	379	32.2%	583	33.7%	670	33.5%	2,413	35.6%	255,818	49.1%
	Unknown	3	0.4%	2	0.2%	1	0.1%	0	0.0%	2	0.0%	0	0.0%
Ethnicity	African-American	441	52.3%	622	52.8%	907	52.4%	1040	52.0%	3,247	47.9%	88,701	17.0%
	Amer. Ind. or Alaskan	2	0.2%	3	0.3%	6	0.3%	2	0.1%	13	0.2%	1,219	0.2%
	Asian	22	2.6%	58	4.9%	71	4.1%	46	2.3%	477	7.0%	58,779	11.3%
	Latino	309	36.6%	396	33.6%	605	34.9%	719	36.0%	2,303	34.0%	157,138	30.2%
	Pacific Islander	16	1.9%	18	1.5%	27	1.6%	19	1.0%	66	1.0%	2,061	0.4%
	White	16	1.9%	18	1.5%	31	1.8%	45	2.3%	229	3.4%	197,570	38.0%
	Unknown or Decline	38	4.5%	62	5.3%	85	4.9%	93	4.7%	445	6.6%	14,908	2.9%
Age/Age Group	Under 17	14	1.7%	18	1.5%	27	1.6%	4	0.2%	394	5.8%	139,140	26.7%
	17	20	2.4%	24	2.0%	36	2.1%	9	0.5%	206	3.0%		
	18	45	5.3%	133	11.3%	175	10.1%	179	9.0%	505	7.4%	11,840	2.3%
	19	94	11.1%	130	11.0%	187	10.8%	263	13.2%	597	8.8%		
	20	67	7.9%	109	9.3%	150	8.7%	230	11.5%	575	8.5%	5,996	1.2%
	21	56	6.6%	83	7.1%	124	7.2%	159	8.0%	440	6.5%	5,720	1.1%
	22	59	7.0%	83	7.1%	99	5.7%	120	6.0%	374	5.5%	20,233	3.9%
	23	44	5.2%	67	5.7%	97	5.6%	103	5.2%	291	4.3%		
	24	36	4.3%	45	3.8%	77	4.4%	88	4.4%	315	4.6%		
	25-29	123	14.6%	164	13.9%	253	14.6%	294	14.7%	973	14.4%	43,779	8.4%
	30-39	143	16.9%	169	14.4%	253	14.6%	298	14.9%	1,115	16.4%	97,447	18.7%
	40-49	104	12.3%	95	8.1%	162	9.4%	175	8.8%	686	10.1%	80,126	15.4%
	50-64	39	4.6%	56	4.8%	88	5.1%	76	3.8%	286	4.2%	69,852	13.4%
	65+	0	0.0%	1	0.1%	4	0.2%	1	0.1%	23	0.3%	46,878	9.0%
Class Load	Full-time	294	34.8%	468	39.8%	600	34.6%	825	41.3%	1,469	21.7%		
	Part-time	489	57.9%	652	55.4%	1065	61.5%	1153	57.7%	4,668	68.8%		

	Not enrolled or N/A	61	7.2%	57	4.8%	67	3.9%	21	1.1%	643	9.5%		
Time of Classes*	Daytime	669	79.3%	960	81.6%	1,313	75.8%	1,650	82.5%	4,642	68.5%		
	Evening	175	20.7%	217	18.4%	419	24.2%	349	17.5%	1,660	24.5%		
	Unknown	0	0.0%	0	0.0%	0	0.0%	0	0.0%	478	7.1%		
Academic Level	AA or Higher	37	4.4%	43	3.7%	75	4.3%	95	4.8%	647	9.5%		
	HS Graduate	700	82.9%	933	79.3%	1,406	81.2%	1,721	86.1%	4,901	72.3%		
	Not a HS Grad	34	4.0%	80	6.8%	112	6.5%	119	6.0%	469	6.9%		
	K-12 Special Admit	26	3.1%	52	4.4%	84	4.8%	12	0.6%	573	8.5%		
	Unknown	47	5.6%	69	5.9%	55	3.2%	52	2.6%	190	2.8%		
Educational Goal	Intend to Transfer	391	46.3%	524	44.5%	705	40.7%	728	36.4%	2,223	32.8%		
	Degree/Certif. Only	69	8.2%	115	9.8%	115	6.6%	174	8.7%	632	9.3%		
	Retrain/recertif.	36	4.3%	67	5.7%	67	3.9%	120	6.0%	479	7.1%		
	Basic Skills/GED	37	4.4%	88	7.5%	88	5.1%	125	6.3%	528	7.8%		
	Enrichment	30	3.6%	46	3.9%	46	2.7%	49	2.5%	243	3.6%		
	Undecided	195	23.1%	203	17.2%	203	11.7%	307	15.4%	1,157	17.1%		
	Unknown	86	10.2%	134	11.4%	134	7.7%	496	24.8%	1,518	22.4%		

B. Student Survey

On a scale of 1 to 10, where 10 is very satisfied and 1 is very unsatisfied, please indicate your satisfaction with the scheduling of classes offered during:

- A. _____ Early morning before 10:00 am
- B. _____ Late morning/early afternoon from 10:00 am to 1:55 pm
- C. _____ Late afternoon from 2:00 pm to 4:25 pm
- D. _____ Evening from 4:30 pm and later
- E. _____ Weekend
- F. _____ Summer intersession
- G. _____ Winter intersession
- H. _____ Through online instruction

C. Course Grade Distribution and Success/Retention Rates

Course Grade Distribution and Success/Retention Rates
Fall 2006 to Fall 2009
Math-Compton

Fall 2006

Course	A	B	C	CR	D	F	I	NC	DR	W	Total Grades	Success Rate	Retention Rate
MATH-10A	42	46	41	0	18	38	0	0	0	38	223	57.8%	83.0%
	18.8%	20.6%	18.4%	0.0%	8.1%	17.0%	0.0%	0.0%	0.0%	17.0%			
MATH-10B	24	22	40	0	15	19	0	0	0	80	200	43.0%	60.0%
	12.0%	11.0%	20.0%	0.0%	7.5%	9.5%	0.0%	0.0%	0.0%	40.0%			
MATH-23	13	21	38	0	5	0	0	0	0	74	151	47.7%	51.0%
	8.6%	13.9%	25.2%	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	49.0%			
MATH-40	6	10	18	0	9	9	0	0	0	56	108	31.5%	48.1%
	5.6%	9.3%	16.7%	0.0%	8.3%	8.3%	0.0%	0.0%	0.0%	51.9%			
MATH-41A	10	20	30	0	11	26	0	0	0	48	145	41.4%	66.9%
	6.9%	13.8%	20.7%	0.0%	7.6%	17.9%	0.0%	0.0%	0.0%	33.1%			
MATH-41B	7	6	10	0	0	1	0	0	0	40	64	35.9%	37.5%
	10.9%	9.4%	15.6%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	62.5%			
MATH-60	1	2	4	0	1	2	0	0	0	0	10	70.0%	100.0%
	10.0%	20.0%	40.0%	0.0%	10.0%	20.0%	0.0%	0.0%	0.0%	0.0%			
MATH-70	7	14	21	0	8	6	0	0	0	55	111	37.8%	50.5%
	6.3%	12.6%	18.9%	0.0%	7.2%	5.4%	0.0%	0.0%	0.0%	49.5%			
MATH-130	1	2	7	0	0	0	0	0	0	11	21	47.6%	47.6%
	4.8%	9.5%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	52.4%			
MATH-150	8	7	12	0	0	2	0	0	0	1	30	90.0%	96.7%

	26.7%	23.3%	40.0%	0.0%	0.0%	6.7%	0.0%	0.0%	0.0%	3.3%			
MATH-170	0	1	3	0	0	0	0	0	0	1	5		
	0.0%	20.0%	60.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%		80.0%	80.0%
MATH-180	0	1	0	0	0	1	0	0	0	2	4		
	0.0%	25.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	50.0%		25.0%	50.0%
Course Totals	119	152	224	0	67	104	0	0	0	406	1,072		
	11.1%	14.2%	20.9%	0.0%	6.3%	9.7%	0.0%	0.0%	0.0%	37.9%		46.2%	62.1%
Division Total/Avg	119	152	224	0	67	104	0	0	0	406	1,072		
	11.1%	14.2%	20.9%	0.0%	6.3%	9.7%	0.0%	0.0%	0.0%	37.9%		46.2%	62.1%
College Total/Avg	15,458	11,582	8,382	4,421	2,809	4,891	345	1,318	0	14,220	63,426		
	24.4%	18.3%	13.2%	7.0%	4.4%	7.7%	0.5%	2.1%	0.0%	22.4%		62.8%	77.6%

Fall 2007

Course	A	B	C	CR	D	F	I	NC	DR	W	Total Grades	Success Rate	Retention Rate
MATH-10A	10	8	13	0	6	0	0	0	0	37	74		
	13.5%	10.8%	17.6%	0.0%	8.1%	0.0%	0.0%	0.0%	0.0%	50.0%		41.9%	50.0%
MATH-10B	5	5	22	0	2	0	0	0	6	11	51		
	9.8%	9.8%	43.1%	0.0%	3.9%	0.0%	0.0%	0.0%	11.8%	21.6%		62.7%	66.7%
MATH-12	16	32	33	0	11	3	0	0	33	61	189		
	8.5%	16.9%	17.5%	0.0%	5.8%	1.6%	0.0%	0.0%	17.5%	32.3%		42.9%	50.3%
MATH-23	14	25	41	0	18	14	0	0	24	41	177		
	7.9%	14.1%	23.2%	0.0%	10.2%	7.9%	0.0%	0.0%	13.6%	23.2%		45.2%	63.3%
MATH-40	10	7	30	0	17	2	0	0	14	42	122		
	8.2%	5.7%	24.6%	0.0%	13.9%	1.6%	0.0%	0.0%	11.5%	34.4%		38.5%	54.1%
MATH-41A	8	18	26	0	9	6	0	0	5	34	106		
	7.5%	17.0%	24.5%	0.0%	8.5%	5.7%	0.0%	0.0%	4.7%	32.1%		49.1%	63.2%
MATH-41B	0	5	17	0	9	1	0	0	4	7	43		
	0.0%	11.6%	39.5%	0.0%	20.9%	2.3%	0.0%	0.0%	9.3%	16.3%		51.2%	74.4%
MATH-70	11	20	32	0	9	15	0	0	8	68	163		
	6.7%	12.3%	19.6%	0.0%	5.5%	9.2%	0.0%	0.0%	4.9%	41.7%		38.7%	53.4%
MATH-130	10	11	15	0	3	0	0	0	1	5	45		
	22.2%	24.4%	33.3%	0.0%	6.7%	0.0%	0.0%	0.0%	2.2%	11.1%		80.0%	86.7%
MATH-140	7	4	6	0	0	0	0	0	0	2	19		
	36.8%	21.1%	31.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%		89.5%	89.5%
MATH-150	6	10	9	0	4	1	0	0	3	11	44		
	13.6%	22.7%	20.5%	0.0%	9.1%	2.3%	0.0%	0.0%	6.8%	25.0%		56.8%	68.2%
MATH-170	1	0	1	0	1	1	1	0	1	2	8		
	12.5%	0.0%	12.5%	0.0%	12.5%	12.5%	12.5%	0.0%	12.5%	25.0%		25.0%	62.5%
Course Totals	98	145	245	0	89	43	1	0	99	321	1,041		
	9.4%	13.9%	23.5%	0.0%	8.5%	4.1%	0.1%	0.0%	9.5%	30.8%		46.9%	59.7%
Division Total/Avg	98	145	245	0	89	43	1	0	99	321	1,041		
	9.4%	13.9%	23.5%	0.0%	8.5%	4.1%	0.1%	0.0%	9.5%	30.8%		46.9%	59.7%
College Total/Avg	16,244	11,674	8,356	4,788	2,743	5,030	360	1,322	2,566	12,270	65,353		
	24.9%	17.9%	12.8%	7.3%	4.2%	7.7%	0.6%	2.0%	3.9%	18.8%		62.8%	77.3%

Fall 2008

Course	A	B	C	P	D	F	I	NP	DR	W	Total Grades	Success Rate	Retention Rate
MATH-10A	24	17	21	0	15	19	0	0	56	21	173	35.8%	55.5%
	13.9%	9.8%	12.1%	0.0%	8.7%	11.0%	0.0%	0.0%	32.4%	12.1%			
MATH-10B	7	10	7	0	2	9	0	0	0	8	43	55.8%	81.4%
	16.3%	23.3%	16.3%	0.0%	4.7%	20.9%	0.0%	0.0%	0.0%	18.6%			
MATH-12	38	76	73	0	21	44	0	0	49	117	418	44.7%	60.3%
	9.1%	18.2%	17.5%	0.0%	5.0%	10.5%	0.0%	0.0%	11.7%	28.0%			
MATH-23	22	39	45	0	25	25	0	0	21	92	269	39.4%	58.0%
	8.2%	14.5%	16.7%	0.0%	9.3%	9.3%	0.0%	0.0%	7.8%	34.2%			
MATH-25	1	4	5	0	5	10	0	0	4	16	45	22.2%	55.6%
	2.2%	8.9%	11.1%	0.0%	11.1%	22.2%	0.0%	0.0%	8.9%	35.6%			
MATH-40	11	18	30	0	15	15	0	0	15	74	178	33.1%	50.0%
	6.2%	10.1%	16.9%	0.0%	8.4%	8.4%	0.0%	0.0%	8.4%	41.6%			
MATH-41A	1	3	11	0	8	10	0	0	1	21	55	27.3%	60.0%
	1.8%	5.5%	20.0%	0.0%	14.5%	18.2%	0.0%	0.0%	1.8%	38.2%			
MATH-41B	3	4	11	0	5	1	0	0	2	26	52	34.6%	46.2%
	5.8%	7.7%	21.2%	0.0%	9.6%	1.9%	0.0%	0.0%	3.8%	50.0%			
MATH-70	18	33	47	0	17	8	0	0	20	90	233	42.1%	52.8%
	7.7%	14.2%	20.2%	0.0%	7.3%	3.4%	0.0%	0.0%	8.6%	38.6%			
MATH-110	2	3	5	0	0	2	0	0	1	1	14	71.4%	85.7%
	14.3%	21.4%	35.7%	0.0%	0.0%	14.3%	0.0%	0.0%	7.1%	7.1%			
MATH-130	6	13	16	0	0	1	0	0	5	9	50	70.0%	72.0%
	12.0%	26.0%	32.0%	0.0%	0.0%	2.0%	0.0%	0.0%	10.0%	18.0%			
MATH-140	12	3	11	0	0	0	0	0	0	0	26	100.0%	100.0%
	46.2%	11.5%	42.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
MATH-150	7	20	11	0	17	9	1	0	6	17	88	43.2%	73.9%
	8.0%	22.7%	12.5%	0.0%	19.3%	10.2%	1.1%	0.0%	6.8%	19.3%			
Course Totals	152	243	293	0	130	153	1	0	180	492	1,644	41.8%	59.1%
	9.2%	14.8%	17.8%	0.0%	7.9%	9.3%	0.1%	0.0%	10.9%	29.9%			
Division Total/Avg	152	243	293	0	130	153	1	0	180	492	1,644	41.8%	59.1%
	9.2%	14.8%	17.8%	0.0%	7.9%	9.3%	0.1%	0.0%	10.9%	29.9%			
College Total/Avg	18,319	12,726	9,310	5,700	3,176	6,871	461	1,814	3,085	10,741	72,203	63.8%	80.9%
	25.4%	17.6%	12.9%	7.9%	4.4%	9.5%	0.6%	2.5%	4.3%	14.9%			

Fall 2009

Course	A	B	C	P	D	F	I	NP	DR	W	Total Grades	Success Rate	Retention Rate
MATH-10A	5	7	24	0	6	14	0	0	4	32	92	39.1%	60.9%
	5.4%	7.6%	26.1%	0.0%	6.5%	15.2%	0.0%	0.0%	4.3%	34.8%			
MATH-10B	2	0	3	0	0	2	0	0	0	6	13	38.5%	53.8%
	15.4%	0.0%	23.1%	0.0%	0.0%	15.4%	0.0%	0.0%	0.0%	46.2%			
MATH-12	64	68	106	0	63	55	2	0	48	137	543	43.8%	65.9%
	11.8%	12.5%	19.5%	0.0%	11.6%	10.1%	0.4%	0.0%	8.8%	25.2%			
MATH-23	57	58	79	0	21	32	0	0	41	116	404	48.0%	61.1%
	14.1%	14.4%	19.6%	0.0%	5.2%	7.9%	0.0%	0.0%	10.1%	28.7%			

MATH-33	1	2	12	0	8	16	0	0	0	10	49		
	2.0%	4.1%	24.5%	0.0%	16.3%	32.7%	0.0%	0.0%	0.0%	20.4%		30.6%	79.6%
MATH-40	16	41	58	0	17	39	0	0	24	76	271		
	5.9%	15.1%	21.4%	0.0%	6.3%	14.4%	0.0%	0.0%	8.9%	28.0%		42.4%	63.1%
MATH-43	1	5	12	0	6	0	0	0	3	9	36		
	2.8%	13.9%	33.3%	0.0%	16.7%	0.0%	0.0%	0.0%	8.3%	25.0%		50.0%	66.7%
MATH-60	1	4	2	0	0	1	0	0	3	1	12		
	8.3%	33.3%	16.7%	0.0%	0.0%	8.3%	0.0%	0.0%	25.0%	8.3%		58.3%	66.7%
MATH-73	22	34	69	0	27	18	0	0	19	76	265		
	8.3%	12.8%	26.0%	0.0%	10.2%	6.8%	0.0%	0.0%	7.2%	28.7%		47.2%	64.2%
MATH-80	4	1	3	0	2	1	0	0	2	13	26		
	15.4%	3.8%	11.5%	0.0%	7.7%	3.8%	0.0%	0.0%	7.7%	50.0%		30.8%	42.3%
MATH-130	15	12	25	0	1	3	0	0	5	9	70		
	21.4%	17.1%	35.7%	0.0%	1.4%	4.3%	0.0%	0.0%	7.1%	12.9%		74.3%	80.0%
MATH-150	15	36	25	0	7	11	0	0	15	19	128		
	11.7%	28.1%	19.5%	0.0%	5.5%	8.6%	0.0%	0.0%	11.7%	14.8%		59.4%	73.4%
Course Totals	203	268	418	0	158	192	2	0	164	504	1,909		
	10.6%	14.0%	21.9%	0.0%	8.3%	10.1%	0.1%	0.0%	8.6%	26.4%		46.6%	65.0%
Division Total/Avg	175	226	322	0	115	157	2	0	140	396	1,533		
	11.4%	14.7%	21.0%	0.0%	7.5%	10.2%	0.1%	0.0%	9.1%	25.8%		47.2%	65.0%
College Total/Avg	18,808	13,245	9,880	5,269	3,201	5,941	388	1,538	3,042	9,914	71,226		
	26.4%	18.6%	13.9%	7.4%	4.5%	8.3%	0.5%	2.2%	4.3%	13.9%		66.3%	81.8%

**Course Grade Distribution and
Success/Retention Rates
Spring 2007-2010
Math- Compton**

Spring 2007

Course	A	B	C	CR	D	F	I	NC	DR	W	Total Grades	Success Rate	Retention Rate
MATH-10A	28	23	43	0	3	20	0	0	0	56	173		
	16.2%	13.3%	24.9%	0.0%	1.7%	11.6%	0.0%	0.0%	0.0%	32.4%		54.3%	67.6%
MATH-10B	14	15	35	0	12	9	0	2	0	61	148		
	9.5%	10.1%	23.6%	0.0%	8.1%	6.1%	0.0%	1.4%	0.0%	41.2%		43.2%	58.8%
MATH-120	2	3	6	0	0	0	0	0	0	2	13		
	15.4%	23.1%	46.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.4%		84.6%	84.6%
MATH-130	0	4	7	0	3	3	1	0	0	4	22		
	0.0%	18.2%	31.8%	0.0%	13.6%	13.6%	4.5%	0.0%	0.0%	18.2%		50.0%	81.8%
MATH-140	17	5	6	0	0	0	0	0	0	0	28		
	60.7%	17.9%	21.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		100.0%	100.0%
MATH-150	2	6	9	0	6	2	0	0	0	14	39		
	5.1%	15.4%	23.1%	0.0%	15.4%	5.1%	0.0%	0.0%	0.0%	35.9%		43.6%	64.1%
MATH-170	1	1	1	0	0	2	0	0	0	0	5		
	20.0%	20.0%	20.0%	0.0%	0.0%	40.0%	0.0%	0.0%	0.0%	0.0%		60.0%	100.0%
MATH-23	9	18	26	0	4	8	0	0	0	59	124		
	7.3%	14.5%	21.0%	0.0%	3.2%	6.5%	0.0%	0.0%	0.0%	47.6%		42.7%	52.4%
MATH-40	11	23	31	0	1	23	4	0	0	45	138		
												47.1%	67.4%

	8.0%	16.7%	22.5%	0.0%	0.7%	16.7%	2.9%	0.0%	0.0%	32.6%			
MATH-41A	3	9	21	0	12	6	0	0	0	26	77		
	3.9%	11.7%	27.3%	0.0%	15.6%	7.8%	0.0%	0.0%	0.0%	33.8%		42.9%	66.2%
MATH-41B	4	7	10	0	9	5	0	0	0	29	64		
	6.3%	10.9%	15.6%	0.0%	14.1%	7.8%	0.0%	0.0%	0.0%	45.3%		32.8%	54.7%
MATH-60	0	1	1	0	0	1	0	0	0	0	3		
	0.0%	33.3%	33.3%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%		66.7%	100.0%
MATH-70	13	17	20	0	7	10	0	0	0	45	112		
	11.6%	15.2%	17.9%	0.0%	6.3%	8.9%	0.0%	0.0%	0.0%	40.2%		44.6%	59.8%
Course Totals	104	132	216	0	57	89	5	2	0	341	946		
	11.0%	14.0%	22.8%	0.0%	6.0%	9.4%	0.5%	0.2%	0.0%	36.0%		47.8%	64.0%
Division Total/Avg	104	132	216	0	57	89	5	2	0	341	946		
	11.0%	14.0%	22.8%	0.0%	6.0%	9.4%	0.5%	0.2%	0.0%	36.0%		47.8%	64.0%
College Total/Avg	1,831	1,500	1,089	304	312	280	51	89	0	2,214	7,670		
	23.9%	19.6%	14.2%	4.0%	4.1%	3.7%	0.7%	1.2%	0.0%	28.9%		61.6%	71.1%

Spring 2008

Course	A	B	C	CR	D	F	I	NC	DR	W	Total Grades	Success Rate	Retention Rate
MATH-10A	14	5	8	0	1	20	0	0	3	36	87		
	16.1%	5.7%	9.2%	0.0%	1.1%	23.0%	0.0%	0.0%	3.4%	41.4%		31.0%	55.2%
MATH-10B	1	2	0	0	0	9	0	0	1	10	23		
	4.3%	8.7%	0.0%	0.0%	0.0%	39.1%	0.0%	0.0%	4.3%	43.5%		13.0%	52.2%
MATH-12	28	27	42	0	20	17	0	0	4	141	279		
	10.0%	9.7%	15.1%	0.0%	7.2%	6.1%	0.0%	0.0%	1.4%	50.5%		34.8%	48.0%
MATH-130	10	7	16	0	0	2	0	0	3	9	47		
	21.3%	14.9%	34.0%	0.0%	0.0%	4.3%	0.0%	0.0%	6.4%	19.1%		70.2%	74.5%
MATH-140	11	8	8	0	0	0	0	0	0	4	31		
	35.5%	25.8%	25.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.9%		87.1%	87.1%
MATH-150	10	17	10	0	2	1	0	0	2	19	61		
	16.4%	27.9%	16.4%	0.0%	3.3%	1.6%	0.0%	0.0%	3.3%	31.1%		60.7%	65.6%
MATH-160	10	5	5	0	0	0	0	0	1	1	22		
	45.5%	22.7%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	4.5%		90.9%	90.9%
MATH-23	26	32	42	0	14	17	0	0	9	82	222		
	11.7%	14.4%	18.9%	0.0%	6.3%	7.7%	0.0%	0.0%	4.1%	36.9%		45.0%	59.0%
MATH-40	13	27	28	0	15	17	0	0	5	71	176		
	7.4%	15.3%	15.9%	0.0%	8.5%	9.7%	0.0%	0.0%	2.8%	40.3%		38.6%	56.8%
MATH-41A	3	7	14	0	1	11	0	0	2	28	66		
	4.5%	10.6%	21.2%	0.0%	1.5%	16.7%	0.0%	0.0%	3.0%	42.4%		36.4%	54.5%
MATH-41B	4	9	18	0	0	5	0	0	2	18	56		
	7.1%	16.1%	32.1%	0.0%	0.0%	8.9%	0.0%	0.0%	3.6%	32.1%		55.4%	64.3%
MATH-70	9	15	46	0	9	11	0	0	4	59	153		
	5.9%	9.8%	30.1%	0.0%	5.9%	7.2%	0.0%	0.0%	2.6%	38.6%		45.8%	58.8%
Course Totals	139	161	237	0	62	110	0	0	36	478	1,223		
	11.4%	13.2%	19.4%	0.0%	5.1%	9.0%	0.0%	0.0%	2.9%	39.1%		43.9%	58.0%
Division Total/Avg	139	161	237	0	62	110	0	0	36	478	1,223		
	11.4%	13.2%	19.4%	0.0%	5.1%	9.0%	0.0%	0.0%	2.9%	39.1%		43.9%	58.0%
College Total/Avg	2,137	1,928	1,531	514	382	570	14	195	345	2,717	10,333		
	20.7%	18.7%	14.8%	5.0%	3.7%	5.5%	0.1%	1.9%	3.3%	26.3%		59.1%	70.4%

Spring 2009

Course	A	B	C	P	D	F	I	NP	DR	W	Total Grades	Success Rate	Retention Rate
MATH-10A	15	7	15	0	22	16	0	0	19	6	100	37.0%	75.0%
	15.0%	7.0%	15.0%	0.0%	22.0%	16.0%	0.0%	0.0%	19.0%	6.0%			
MATH-10B	7	17	10	0	4	15	0	0	5	1	59	57.6%	89.8%
	11.9%	28.8%	16.9%	0.0%	6.8%	25.4%	0.0%	0.0%	8.5%	1.7%			
MATH-111	2	3	4	0	0	1	0	0	0	1	11	81.8%	90.9%
	18.2%	27.3%	36.4%	0.0%	0.0%	9.1%	0.0%	0.0%	0.0%	9.1%			
MATH-12	42	33	55	0	36	74	2	0	36	132	410	31.7%	59.0%
	10.2%	8.0%	13.4%	0.0%	8.8%	18.0%	0.5%	0.0%	8.8%	32.2%			
MATH-130	13	13	15	0	1	1	0	0	4	19	66	62.1%	65.2%
	19.7%	19.7%	22.7%	0.0%	1.5%	1.5%	0.0%	0.0%	6.1%	28.8%			
MATH-140	8	7	6	0	0	0	0	0	0	2	23	91.3%	91.3%
	34.8%	30.4%	26.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.7%			
MATH-150	18	17	24	0	4	14	0	0	7	22	106	55.7%	72.6%
	17.0%	16.0%	22.6%	0.0%	3.8%	13.2%	0.0%	0.0%	6.6%	20.8%			
MATH-160	15	8	5	0	0	0	0	0	0	2	30	93.3%	93.3%
	50.0%	26.7%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%			
MATH-170	0	1	2	0	4	2	0	0	0	2	11	27.3%	81.8%
	0.0%	9.1%	18.2%	0.0%	36.4%	18.2%	0.0%	0.0%	0.0%	18.2%			
MATH-180	0	3	6	0	2	0	0	0	0	1	12	75.0%	91.7%
	0.0%	25.0%	50.0%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	8.3%			
MATH-190	8	12	5	0	0	0	0	0	0	0	25	100.0%	100.0%
	32.0%	48.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
MATH-23	27	51	59	0	24	30	0	0	34	116	341	40.2%	56.0%
	7.9%	15.0%	17.3%	0.0%	7.0%	8.8%	0.0%	0.0%	10.0%	34.0%			
MATH-25	4	3	4	0	1	3	0	0	5	4	24	45.8%	62.5%
	16.7%	12.5%	16.7%	0.0%	4.2%	12.5%	0.0%	0.0%	20.8%	16.7%			
MATH-40	15	34	48	0	32	24	0	0	17	73	243	39.9%	63.0%
	6.2%	14.0%	19.8%	0.0%	13.2%	9.9%	0.0%	0.0%	7.0%	30.0%			
MATH-41A	1	9	14	0	10	10	0	0	1	20	65	36.9%	67.7%
	1.5%	13.8%	21.5%	0.0%	15.4%	15.4%	0.0%	0.0%	1.5%	30.8%			
MATH-41B	0	4	6	0	1	7	0	0	6	17	41	24.4%	43.9%
	0.0%	9.8%	14.6%	0.0%	2.4%	17.1%	0.0%	0.0%	14.6%	41.5%			
MATH-70	16	20	60	0	15	16	0	0	14	76	217	44.2%	58.5%
	7.4%	9.2%	27.6%	0.0%	6.9%	7.4%	0.0%	0.0%	6.5%	35.0%			
Course Totals	191	242	338	0	156	213	2	0	148	494	1,784	43.2%	64.0%
	10.7%	13.6%	18.9%	0.0%	8.7%	11.9%	0.1%	0.0%	8.3%	27.7%			
Division Total/Avg	191	242	338	0	156	213	2	0	148	494	1,784	43.2%	64.0%
	10.7%	13.6%	18.9%	0.0%	8.7%	11.9%	0.1%	0.0%	8.3%	27.7%			
College Total/Avg	2,480	2,320	1,854	797	685	899	52	321	838	3,098	13,344	55.8%	70.5%
	18.6%	17.4%	13.9%	6.0%	5.1%	6.7%	0.4%	2.4%	6.3%	23.2%			

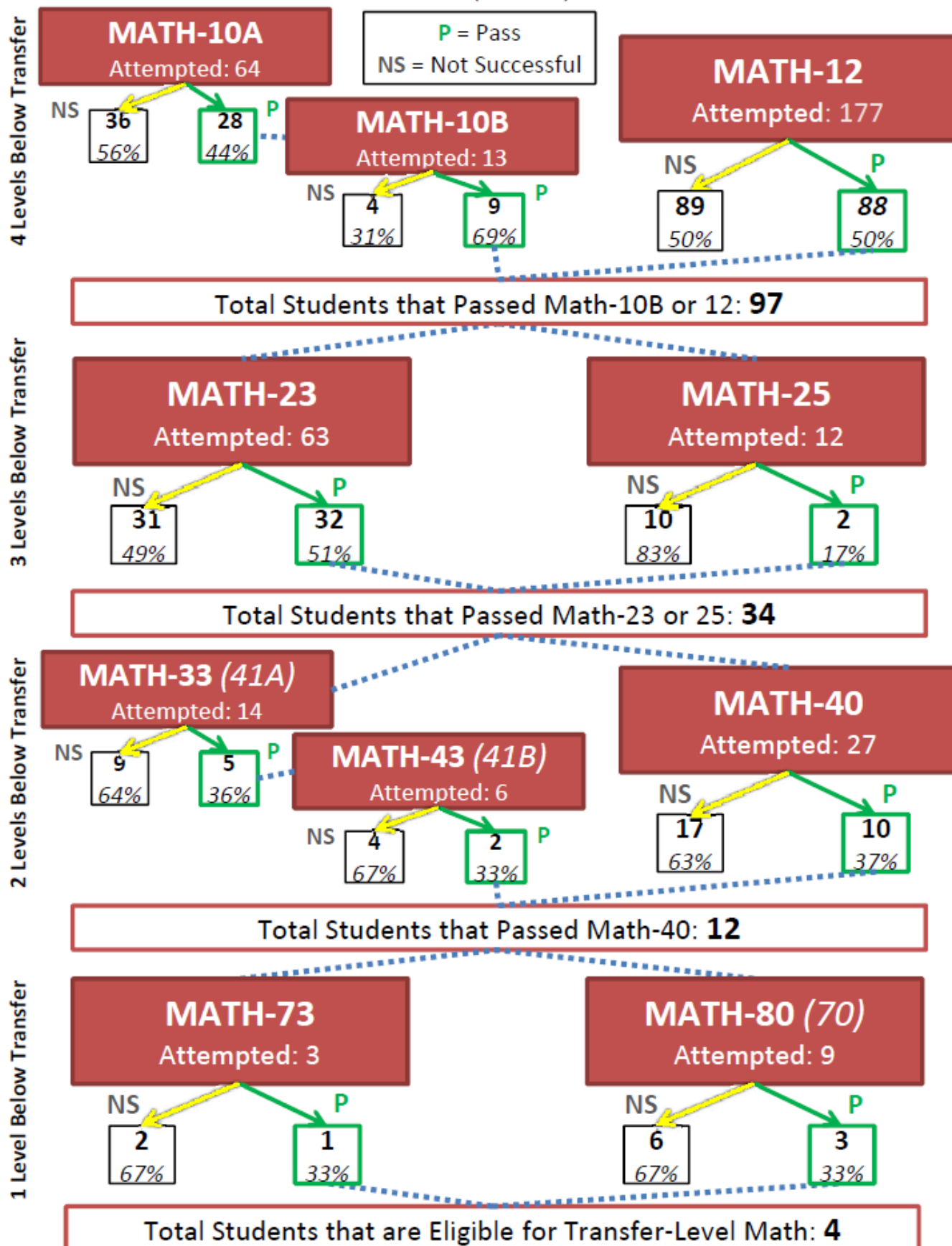
Spring 2010

Course	A	B	C	P	D	F	I	NP	DR	W	Total Grades	Success Rate	Retention Rate
MATH-10A	5	10	22	0	18	32	0	0	10	16	113	32.7%	77.0%
	4.4%	8.8%	19.5%	0.0%	15.9%	28.3%	0.0%	0.0%	8.8%	14.2%			
MATH-10B	2	5	11	0	6	7	0	0	0	12	43	41.9%	72.1%
	4.7%	11.6%	25.6%	0.0%	14.0%	16.3%	0.0%	0.0%	0.0%	27.9%			
MATH-12	60	54	52	0	40	44	0	0	44	143	437	38.0%	57.2%
	13.7%	12.4%	11.9%	0.0%	9.2%	10.1%	0.0%	0.0%	10.1%	32.7%			
MATH-130	10	4	29	0	0	9	0	0	4	10	66	65.2%	78.8%
	15.2%	6.1%	43.9%	0.0%	0.0%	13.6%	0.0%	0.0%	6.1%	15.2%			
MATH-150	38	37	26	0	7	11	0	0	7	42	168	60.1%	70.8%
	22.6%	22.0%	15.5%	0.0%	4.2%	6.5%	0.0%	0.0%	4.2%	25.0%			
MATH-170	2	1	5	0	3	0	0	0	0	4	15	53.3%	73.3%
	13.3%	6.7%	33.3%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	26.7%			
MATH-23	41	45	76	0	32	47	0	0	19	133	393	41.2%	61.3%
	10.4%	11.5%	19.3%	0.0%	8.1%	12.0%	0.0%	0.0%	4.8%	33.8%			
MATH-33	2	13	11	0	3	9	0	0	5	24	67	38.8%	56.7%
	3.0%	19.4%	16.4%	0.0%	4.5%	13.4%	0.0%	0.0%	7.5%	35.8%			
MATH-40	24	36	56	0	27	58	1	0	21	80	303	38.3%	66.7%
	7.9%	11.9%	18.5%	0.0%	8.9%	19.1%	0.3%	0.0%	6.9%	26.4%			
MATH-43	5	10	8	0	0	0	0	0	5	14	42	54.8%	54.8%
	11.9%	23.8%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.9%	33.3%			
MATH-60	2	1	2	0	4	0	0	0	0	6	15	33.3%	60.0%
	13.3%	6.7%	13.3%	0.0%	26.7%	0.0%	0.0%	0.0%	0.0%	40.0%			
MATH-73	43	59	81	0	15	29	1	0	11	98	337	54.3%	67.7%
	12.8%	17.5%	24.0%	0.0%	4.5%	8.6%	0.3%	0.0%	3.3%	29.1%			
MATH-80	1	3	8	0	4	1	0	0	3	10	30	40.0%	56.7%
	3.3%	10.0%	26.7%	0.0%	13.3%	3.3%	0.0%	0.0%	10.0%	33.3%			
Course Totals	235	278	387	0	159	247	2	0	129	592	2,029	44.4%	64.5%
	11.6%	13.7%	19.1%	0.0%	7.8%	12.2%	0.1%	0.0%	6.4%	29.2%			
Division Total/Avg	235	278	387	0	159	247	2	0	129	592	2,029	44.4%	64.5%
	11.6%	13.7%	19.1%	0.0%	7.8%	12.2%	0.1%	0.0%	6.4%	29.2%			
College Total/Avg	3,607	2,943	2,405	1,041	864	1,332	92	337	1,013	3,593	17,227	58.0%	73.3%
	20.9%	17.1%	14.0%	6.0%	5.0%	7.7%	0.5%	2.0%	5.9%	20.9%			

• **Success/Improvement Rates**

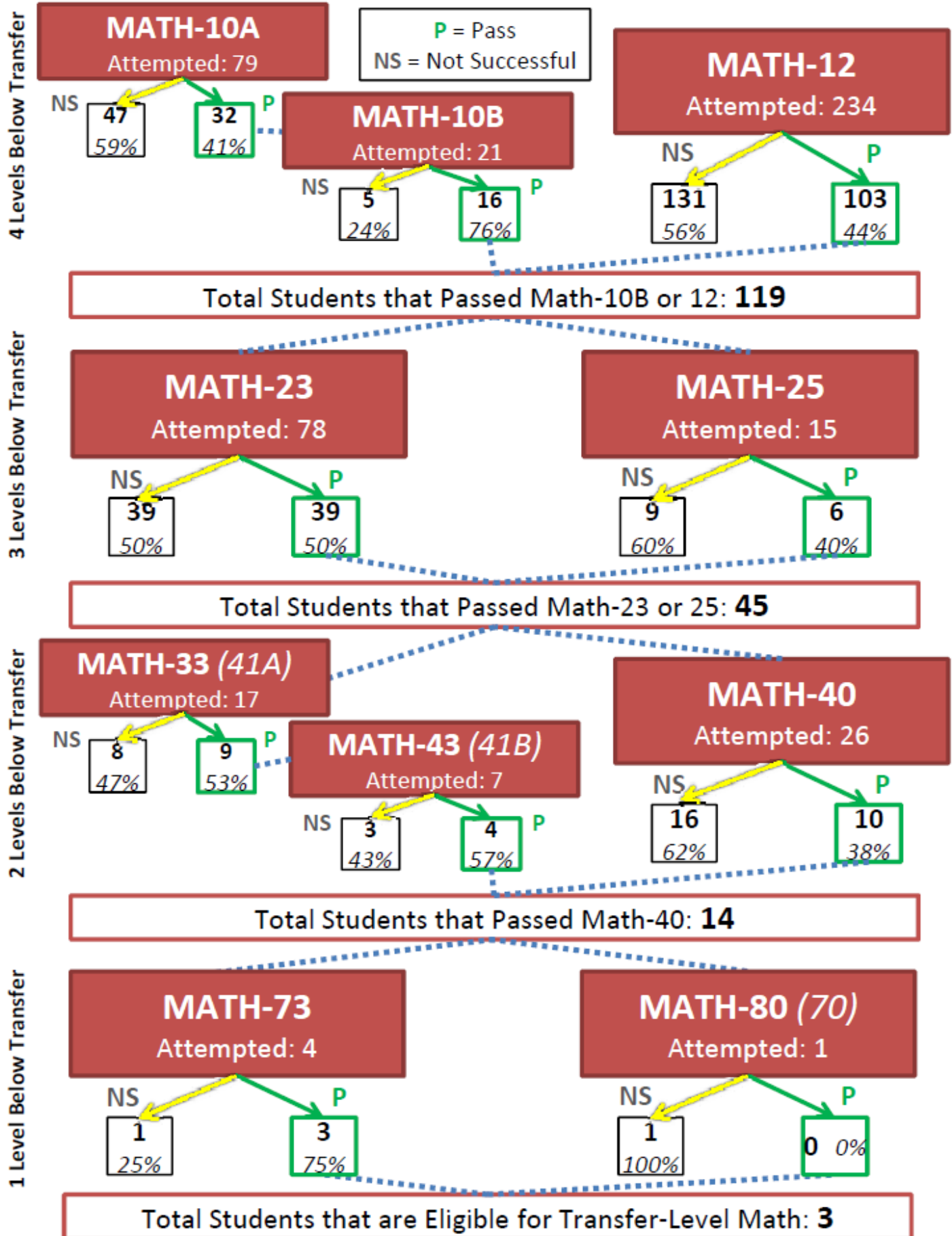
Tracking of El Camino College Compton Center Students who First Attempted Math-10A & 10B or 12 in Fall 2007

Fall 2007 - Summer 2009 (8 Terms) n = 241 Students



Tracking of El Camino College Compton Center Students who First Attempted Math-10A & 10B or 12 in Spring 2008

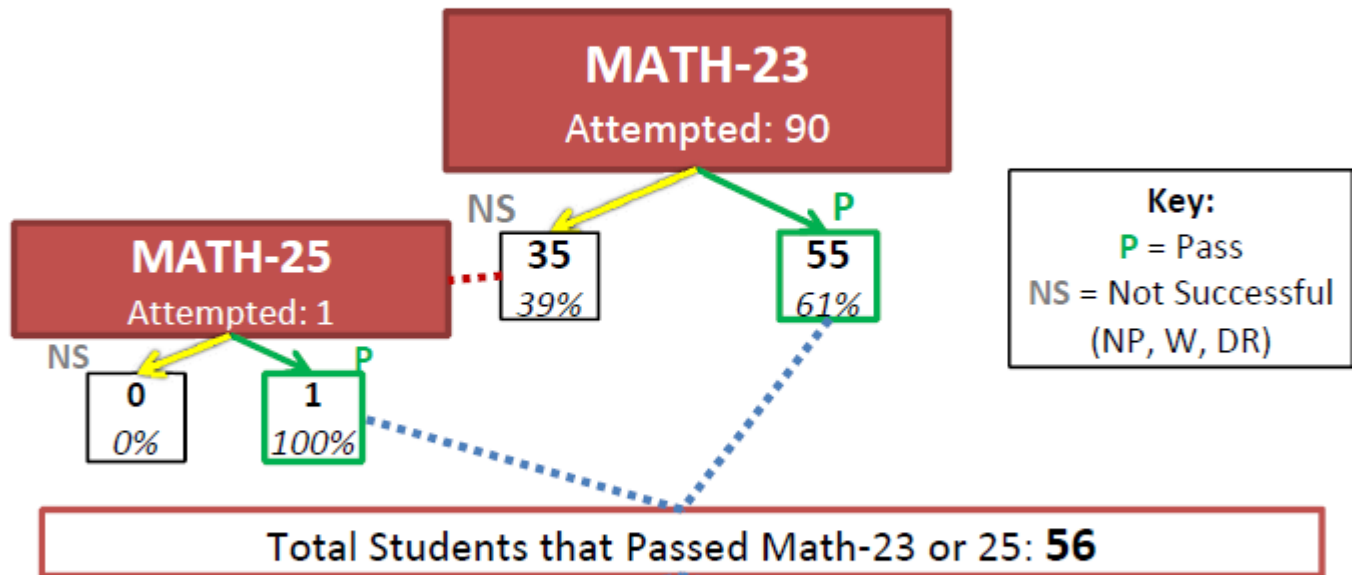
Spring 2008 - Fall 2009 (8 Terms) n = 313 Students



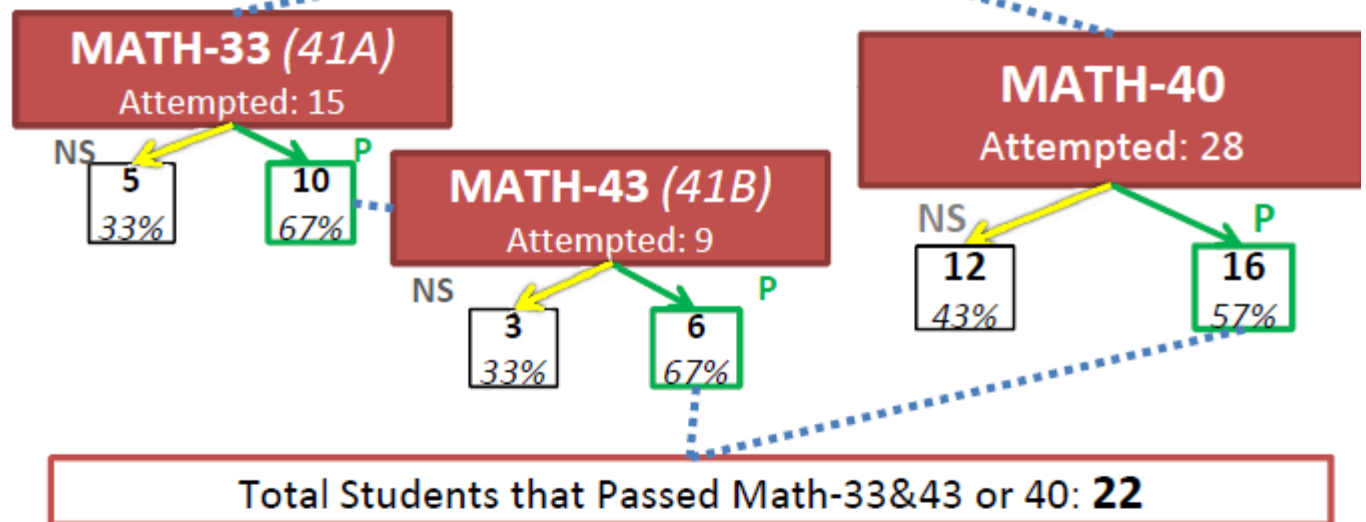
Tracking of El Camino College Compton Center Students who First Attempted Math-23 in Fall 2007

Fall 2007 - Summer 2009 (8 Terms) n = 90 Students

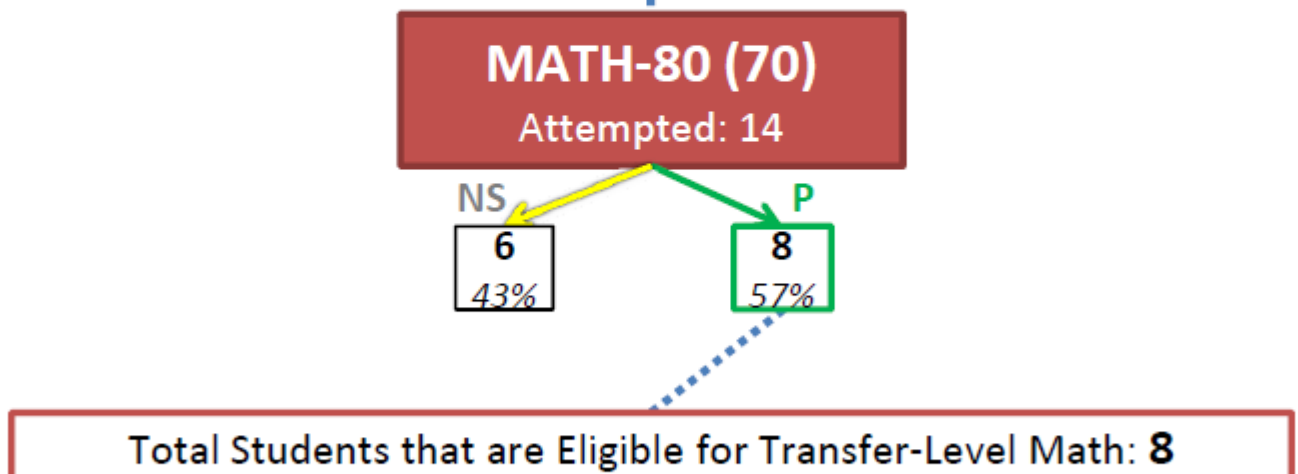
3 Levels Below Transfer



2 Levels Below Transfer

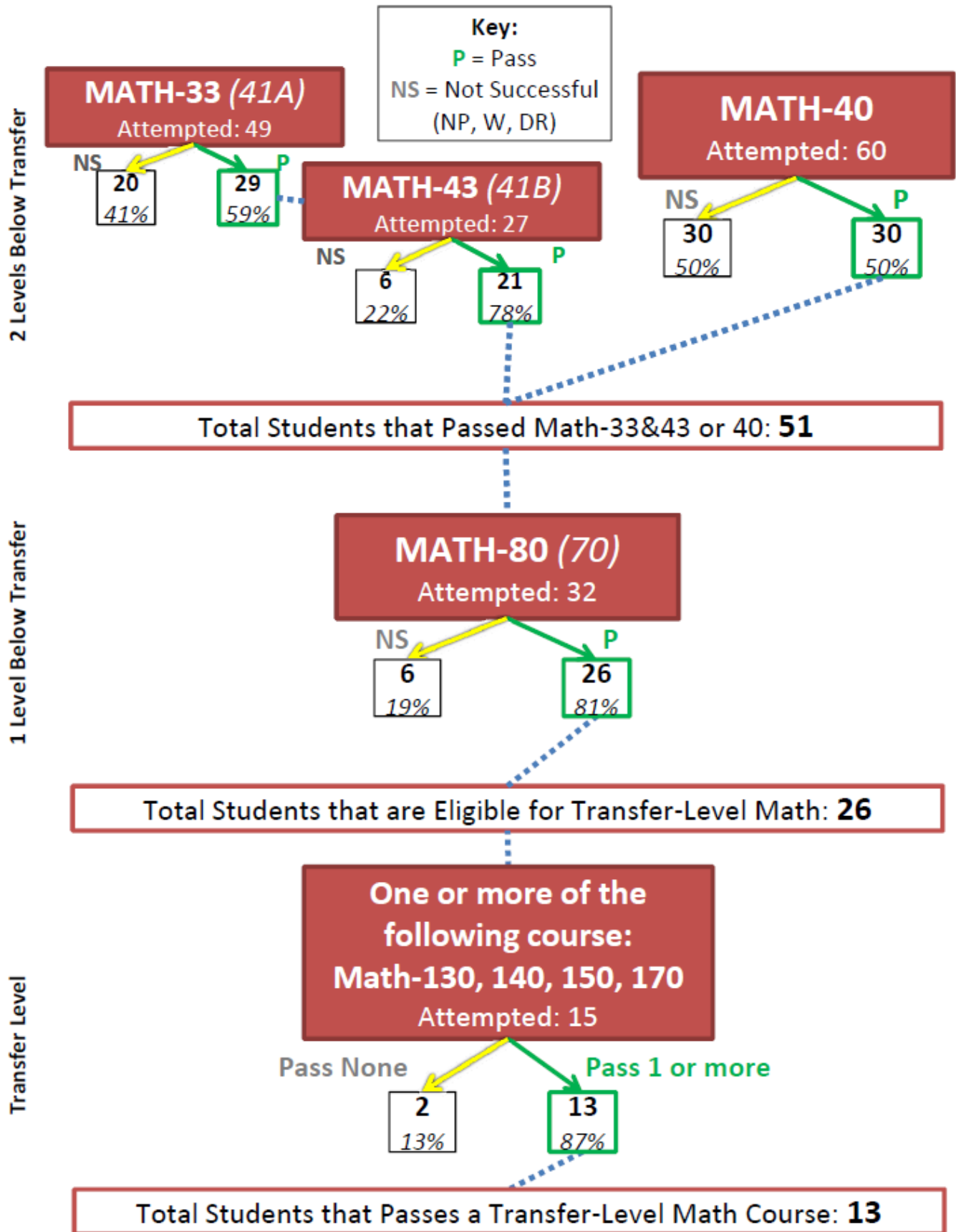


1 Level Below Transfer



Tracking of El Camino College Compton Center Students who First Attempted Math-40/41A in Fall 2007

Fall 2007 - Summer 2009 (8 Terms) n = 109 Students



Tracking of El Camino College Compton Center Students who First Attempted Math-40/41A in Spring 2008

Spring 2008 - Winter 2010 (8 Terms) n = 103 Students

