

**Program Review For Group I Math Courses  
(Math 190, 191, 210, 220, 270)**

**Robert Horvath  
Robert Lewis  
Paul Yun  
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**Note:** Rather than select data from three successive fall semesters, we decided to select three successive spring semesters because Math 210 which is a Group I course is only offered in the spring.

**I. Overview**

**A. Description of the Program**

The program consists of the following math courses: Math 190 (Calculus I), Math 191 (Calculus II), Math 220 ( Multi-variable Calculus), Math 270 ( Differential Equations with Linear Algebra) and Math 210 (Discrete Mathematics). Students majoring in one of the physical sciences, one of the natural sciences, pre-med, economics and computer science generally have to take two or more of these classes depending on their major and the college the student intends to transfer to.

**B. Status of Previous Recommendation**

The previous program review was rejected. However, the previous program review committee did strongly recommend the establishment of a tutoring center. After demonstrating how such a center could generate revenue for the college, a successful tutoring center has been up and running since. During the fall of 2005, 361 students in Group I classes were surveyed. The student survey shows that 27% of the students in Group I math course use the math tutoring center.

**II. Program Statistics**

**A. Analysis of the FTES by Course / Program** using 1 st census data for a 4-year cycle comparing like semesters. (FTES = Actual WSCH \* 16.4 / 525.)

<b>A. Demand: FTES by Course / Program</b>					
<b>Course</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Net</b>
	<b>Spring, 2003</b>	<b>Spring, 2004</b>	<b>Spring, 2005</b>	<b>Spring, 2006</b>	<b>Change</b>
Math 190	51.1	43.5	48.5	50.4	<b>-0.7</b>
Math 191	26.3	22.6	23.1	23.1	<b>-3.2</b>
Math 210	2.3	3.2	3.8	1.7	<b>-0.6</b>
Math 220	8.9	9.7	8.4	7.8	<b>-1.1</b>
Math 270	10.7	10.5	7.9	9.9	<b>-0.8</b>
<b>Totals</b>	<b>99.3</b>	<b>89.5</b>	<b>91.7</b>	<b>92.9</b>	<b>-6.4</b>

Net Change = FTES for Spring, 2006 – FTES for Spring, 2003

- Given the data, can you recognize any trends in course demand in any of the Program’s courses?

With the exception of Math 191 there were slight decreases in FTES for each of these courses. Math 191 appears to have a large decrease but this was caused by a spike in the

FTES during the Spring, 2003. The FTES for Math 191 was consistent for the next three years.

2. What are you doing to respond to trends?

Since the decreases were in most cases small, we feel there is no need to respond to these trends. However, the enrollment in Math 220 for the fall semester of 2006 should be monitored to see if it reflects the loss in Math 191 for the spring semester of 2006.

3. Should a recommendation be written addressing the data?  Yes  No  
(If yes, list.)

**B. Offerings: Fill Rate\***

Instructions: Review and analyze the **fill rate data** (including the fill rate per course for both day and evening), provided by Institutional Research for this program for a three year cycle and answer the following questions:

Average fill rate of courses in program: How does this program compare to:

\* Percent of fill of each classes at census.

<b>B. Offerings:</b>	<b>Fill Rate</b>				
<b>Course</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Net</b>
	<b>Spring, 2003</b>	<b>Spring, 2004</b>	<b>Spring, 2005</b>	<b>Spring, 2006</b>	<b>Change</b>
Math 190	92%	90%	88%	91%	-1%
Math 191	87%	77%	76%	77%	-10%
Math 210	46%	66%	74%	34%	-12%
Math 220	59%	66%	55%	77%	18%
Math 270	87%	87%	64%	80%	-7%

Net Change = Fill rate for Spring, 2006 – Fill Rate for Spring, 2003

1. Given the data, is the program in a growth mode?  Yes  No

In the spring of 2004 there was one less section of Math 190 offered. This in turn meant there were less students available for Math 220 in the spring of 2005. But, there were four sections of Math 220 offered in the Spring, 2005. Only three sections were offered in the springs of 2003, 2004 and 2006. Note the 55% fill rate for Math 220 for the Spring, 2005. In spring 2006 we were back to normal and then some. This explains some but not all of the growth for Math 220 in the Spring of 2006.

The table above also supports the trend that enrollment in the advanced math classes is declining.

2. What adjustments are indicated?

There are no adjustments that can be made. In prior years the South Bay was an aerospace and refinery center. The demand for engineers, scientists, and computer scientists was high. There were an abundance of high paying jobs in these fields. Today the aerospace industry is just about dead and the refineries have an adequate supply of chemical engineers. The job market dictates what students take at college.

We need to find ways to attract more academically talented students from the local high schools. Currently most of these students are encouraged by their principals and counselors to go to prestigious universities. The high schools get their recognition based on how many of their students go to Stanford, Berkeley, etc. (SAT scores and the number of students who take and pass AP courses are other measures.) Over the last three years, interest rates on home equity loans has been historically low. This in turn has allowed parents to send their children directly to the expensive, prestigious universities.

3. Should a recommendation be written that addresses the data?  Yes  No  
(If yes, list.)

We recommend that El Camino College advertise in the *Los Angeles Times* South Bay Edition, the *Daily Breeze*, *US News & World Report: College Edition* and *KNX 1070*. We should send counselors to the local high schools, especially to the ones who send their students directly to the four year schools. We should capitalize on the statistic that community college transfers out perform native students when g.p.a. in upper division courses is used for a measure of success. We should emphasize that it is important where students get their graduate degree and not where they get their B.A. or B.S. degree. El Camino College should emphasize how much money parents could save if their children went to a community college. We know El Camino College has tried some of these ideas. We need to continue. We should cooperate with other community colleges in the area and share expenses for this recruitment.

### C. Scheduling: Student Satisfaction with Scheduling

Instructions: Complete the chart below. Indicate the time when sections of courses in the program are currently scheduled to start. Analyze the data provided by Institutional Research on student satisfaction with scheduling in the program and answer the questions.

Course	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	Via Telecourse	Via Online
190	7:00 am 8:15 am 9:30 am	10:45 am 12:00 pm	2:00 pm 4:00 pm	5:30 pm 6:45 pm	Sat	7:30 am 10:30 am 1:30 pm 5:45 pm	No	No
191	7:00 am 8:15 am 9:30 am	1:00 pm	2:00 pm 3:00 pm	7:00 pm	Sat	8:00 am 6:00 pm	No	No
210			2:00 pm		No	No	No	No
220	8:15 am			7:00 pm	Sat	10:30 am	No	No
270	8:15			6:30 pm	No	No	No	No

Student Preference for Various Time Slots and Formats:								
Before 10 am	10 to 1:55 pm	2 to 4:25 pm	After 4:25	Weekend	Summer	Winter	Online	Telecourses
68%	77%	66%	57%	41%	70%	64%	67%	62%

1. What (if anything) is indicated by the student satisfaction with scheduling?

The schedules we offer satisfy this wide variety of demand. Comparing our class schedules with Orange Coast College, Santiago Canyon College, Santa Ana College, and Golden West College we offer at least as many sections as they do.

Our conclusion is that we are doing a adequate job with scheduling. We offer the three most popular courses ( 190, 191, and 220) at least two times each semester. We offer them in the morning and in the evening. This is the best we can do with the potential enrollment.

2. Are there time periods of high student demand which are not being addressed?  Yes  No

Winter session, online and telecourses have never been offered for these courses.

How could such demand be addressed?

There are plans in the works for the Fall of 2007 by the Dr. Goldman, the dean of mathematics, to start offering some of these classes during the winter and online. He is currently looking for volunteers. The tentative plan to offer part of Math 190 online. The course would meet 3 hours on Saturday and the student would work online for 2 hours. There is also a plan for weekend courses to meet twice a week, two or three hours on Saturday (depending on the course) and two hours on Tuesday evening.

There are no plans to offer any of these courses as telecourses.

3. Should a recommendation be written addressing this area?  Yes  No  
(If yes, list.)

The question on the questionnaire was poorly worded. The question should have read “Would you prefer to take classes offered during the given time slot?” The responses should have been “yes,” “maybe,” and “no.”

#### D. Retention and Success

##### 1. Retention

Instructions: Review and analyze the data on **retention (course completion with a grade other than W)** over a three-year cycle comparing day to evening classes, term to term (e.g. fall to spring, spring to summer, etc.), and course levels.

	Retention Rates Given in Percent					Dept.
	Math 190	Math 191	Math 210	Math 220	Math 270	
<b>Spring, 03</b>	71.5	83.1	58.8	75.4	73.8	74.3
<b>Spring, 04</b>	66.1	77.4	95.7	76.5	70	73.8
<b>Spring, 05</b>	68.2	67.1	96.4	66.1	69.8	71.5
<b>Net Difference</b>	-3.3	-16	37.6	-9.3	-4	-2.8
(Spr05–Spr03)						

1. Given the data, what trends are observed?

The retention rates for Math 190 are lower than the corresponding rates for the department as a whole. This is not surprising because algebra is the leading cause of not making it in Math 190. This is not only true at El Camino College but also at U.C.L.A. (See U.C.L.A. Math Department website for Math 31 A the equivalent course.)

The math department has continuously monitored the prerequisite course, pre-calculus or Math 180. This is done by two on-going committees that meet at least four times a school year to discuss this and other problems. The two committees are appropriately called the pre-calculus committee and the calculus committee.

The last major change the committee made was to upgrade Math 180 from 4 to 5 units.

Another problem is high school, foreign and out-of-state students can test into Math 190. While this calculus placement test is the best that is available it is not perfect. It sometimes places students in Math 190 who really should not be there.

2. Should a recommendation be written addressing the data?  Yes  No

## 2. Success Rate

Instructions: Review and analyze the data on **success rate (students who earned a grade of A,B,C, or Credit)** over a three-year cycle comparing day to evening classes, term to term (e.g. fall to spring, spring to summer, etc.), and course levels and answer the following questions:

	<b>Success Rate Not Including W's In Per Cent</b>					
	<b>Math 190</b>	<b>Math 191</b>	<b>Math 210</b>	<b>Math 220</b>	<b>Math 270</b>	<b>Dept</b>
<b>Spring, 03</b>	81.7	79.6	100	95.7	91.1	75.1
<b>Spring, 04</b>	77.6	79.7	68.2	84.6	92.9	71.9
<b>Spring, 05</b>	76.7	84	85.2	80.5	90	71.6
<b>Net Difference</b>	-5	4.4	-14.8	-15.2	-1.1	-3.5
(Spr05–Spr03)						

1. What trends are observed?

With the exception of Math 191, all of the success rates have declined during the last spring semesters.

With the exception of Math 210 / Spring 2004, the success rates for each of these classes is greater than the corresponding rates for the department as a whole.

2. Should a recommendation be written addressing the data? \_\_\_\_\_ Yes      X   No  
(If yes, list.)

### III. Curriculum

#### A. Course and Content

El Camino College offers the standard lower division math curriculum for students majoring in engineering, one of the physical sciences, and computer science. . The college offers three semesters of calculus, a one semester combination differential equations with linear algebra course, and a one semester discrete mathematics course. Some of the other local community colleges break differential equations and linear algebra into two one semester courses and some colleges offer a second semester of discrete mathematics.

Math 190 (First Semester Calculus) was up-graded in March, 2000 from 4 to 5 units to accommodate projects requiring a Computer Algebraic System (eg. Mathematica, Maple, etc.). This was done because engineers and mathematicians at local aerospace industry were using CAS on the job. CSU Fullerton, Golden West College and Orange Coast College had incorporated CAS into their math program.

Math 270 was up-graded in January, 2001 from 4 to 5 units. An analysis of the course content and demand exceeded the Carnegie requirement for 4 units. Solutions of differential equations by Laplace transform were also added.

The Calculus Committee monitors Group I courses. It meets at least four times each school year to discuss issues related to these courses. The committee is particularly interested in any changes in content or texts the four-year schools make to these courses.

#### 1. Courses Not Offered

Instructions: Indicate the total number of courses in the program and list all courses in the program which are in the catalog but have not been offered in the last three years. Refer to this list to answer the following questions:

There are none.

1. Given the data, are there courses that should be inactivated? \_\_\_\_\_ Yes      X   No
2. If there are courses not offered in the last three years that you do not wish to inactivate, what reasons are there to keep them active?

There are none.

3. Should a recommendation be written addressing the data? \_\_\_\_\_ Yes      X   No  
(If yes, list.)

## 2. Course Revisions and Additions

Instructions: Utilize the Course Review Chart from the Curriculum Office to answer the following:

1. Are there course outlines that should be revised? \_\_\_\_\_ Yes       X   No  
(If yes, list.)
2. Are there courses inconsistent with current practice in the field? \_\_\_ Yes       X   No  
Explain.
3. Should new courses to be added to the program? \_\_\_\_\_ Yes       X   No  
Explain.
4. Are adjustments necessary to the conditions of enrollment (Prerequisite, Corequisite, Recommended Preparation, and Enrollment Limitations) for a specific course to increase student success?  
\_\_\_\_\_ Yes               X   No             \_\_\_\_\_ Uncertain     **Comment.**
5. If the program offers a degree and/or certificate, list them and indicate when the requirements were last reviewed? (If not applicable, skip to Question 7.)

The math department offers an AA Degree in math. This program is designed as a terminal degree in general mathematics. This degree requires mathematics 190, 191 and three courses from mathematics 140, 150, 210, 220, 270.

The math department also offers an AS Degree in math. This program is designed for students planning to transfer with a major in mathematics. This degree requires mathematics 190, 191, 220, and 270.

The requirements were last reviewed during a math department meeting during the fall of 2005.

6. Are these degree and/or certificate requirements inconsistent with current practice? \_\_\_ Yes       X   No  
Explain.
7. Is there a need to create or delete a degree and/or certificate? \_\_\_\_\_ Yes       X   No  
Explain.
8. Should any recommendations be written that address the above responses? \_\_\_\_\_ Yes       X   No  
(If yes, list.)

## B. Articulation

Instructions: Articulation is the process by which courses taken at ECC can be used to satisfy subject matter requirements at another college or university. This is important in the transfer process for students. To help you in this area, you can review articulation agreements at [www.assist.org](http://www.assist.org), the California Articulation Number Guide or meet with the Articulation Officer, Lori Suekawa (ext. 3517).

1. Are there any courses in your curriculum which are part of a lower division preparation for the major that are not articulated with our major transfer institutions?

All of our courses are articulated with identical courses at UC Berkeley, UCLA, and CSU Fullerton. All of our courses with the exception of Math 270 are articulated with CSU Long Beach.

2. What problems, if any, are there in articulating these courses?

Math 270 would be equivalent to Math 370A at CSU Long Beach but the 370A is upper division there and lower division at ECC and the UC's. Our students can get subject credit but not unit credit for Math 270 at CSU Long Beach.

3. Should a recommendation be written addressing above responses?  Yes  No  
(If yes, list.)

## C. Instruction and Assessment

### 1. Learning Methods

1. What learning methods are incorporated inside and outside the classroom in the program to promote student success? **Explain.**

In addition to lecturing, instructors use many different methods to help students master the material. Students are sent to the board, work in groups, participate in gateway exams\*, complete projects using *Mathematica*, and encouraged to go to the math tutoring center and to use *MESA*. Instructors do demonstrations using special mathematical software like *Scientific Notebook*, *Mathematica*, *DPGraph* and *DField*. We also use graphing calculators like the TI-83/84/86.

\* Gateway exams: A student must pass a gateway exam before proceeding. He or she can take the exam as many times as they need to pass it.

2. Should a recommendation be written addressing above response?  Yes  No  
(If yes, list.)

## 2. Assessment

1. How do you evaluate the extent to which the learning objectives, skills, and competencies are being met?

A) Courses

Evaluation is by classroom participation, testing and completion of projects.

B) Program

When possible we ask our students that transferred to four year schools if we did an adequate job preparing them. We also closely monitor the course outlines for UCLA, UCB, CSULB, Cal Poly Pomona and UCI where most of our students transfer to.

2. How do you use the results of the above evaluation to improve student learning and the quality of the program?

If we find out that we should include a certain topic, we would change the course outline to accommodate that change. For example, several years ago solutions to differential equations using the Laplace transform was added to Math 270.

3. Should a recommendation be written addressing this area? \_\_\_\_\_ Yes        X   No  
(If yes, list.)

## IV. Program Requirements

### A. Instructional Support

1. Identify key instructional support areas used by the program.

#### Libraries & Programs:

	Library		Special Resource Center		Basic Skills Study Center		Library Orientation
	Music Library		Puente Program		Honors Transfer Program		Other (Please list.)
	Learning Resource Center Media Materials Collection		Assessment/Testing Office	X	Counseling	X	MESA
	EOP&S/CalWORKS	X	Transfer Center		First Year Experience		
	Learning Communities		Project Success		Honors Transfer Program		

### Computer Labs & Tutoring:

	LMTC Computer Commons		SRC High Technology Center		Other Computer Lab: Please list.		Writing Center
	CAI MAC Lab		Writing Lab				LRC Tutorial Program
	CAI Windows Lab	X	Math & Science Lab			X	Math Tutoring
	TOP Lab		Keyboarding Center				SRC Tutorial Program
	Hawthorne BTC						EOP&S Tutoring
	Inglewood Center						

### Faculty Support Services:

	Graphic Arts	X	Copy Center		Distance Education		Other (Please list.)
	Media Services AV Production	X	Tech Services Help Desk		Teleconferences		Mathematics Brownbag
	Media Services AV Equipment Distribution	X	Support Staff		Webconferences		
	ECC Vehicles		ECC hosted Websites	X	Staff Development		
X	ECC E-mail						

2. Do you have some instructional support needs that are not being met?  Yes  No

Comment.

Many math instructors need handouts ready in less than the 24 hour turn around offered by the copy center.

3. Should a recommendation be written to address your needs?  Yes  No

(If yes, list.)

The copy center could better meet the needs of the math department by resuming walk-in service for small orders on a limited basis.

Staff Development and/or ITS-Technical Services could obtain an *easy to use* web-site builder and offer classes to teach staff how to use it. Hopefully this would enable instructors to put handouts on their website.

### B. Facilities and Equipment

1. Does the program make effective use of its facilities and equipment? Explain.

Most instructors use the dean's copy machine, the math computer lab (MCS7-8), the instructor computer lab (MCS104J), the computers and projection systems located in each classroom, the lap top computers issued by the college, the internet and the copy center. We believe the math department effectively uses all of these resources.

2. Are adequate facilities, equipment and supplies available for the program?  Yes  No  
**Explain.**

3. Are the facilities and equipment adequately maintained?  Yes  No  
**Explain.**

The computers, printers, and projection systems are maintained by a dedicated lab tech (Donna Post). The department would be lost if she ever left.

4. Should a recommendation be written addressing the data?  Yes  No  
(If yes, list.)

The copy center should resume "while-you-wait" service or the dean should permit more than 30 copies.

### C. Staffing

Instructions: Analyze the data on **FTEF, adjunct FTEF, and the FT/PT ratio** for the most recent fall semester and answer the following questions:

The math department used the Spring, 2006 because we wanted to include Math 210 which is an important course taught only in the spring.

**FTEF (full-time equivalent faculty):** # 6.33

**Number of full-time FTEF:** # 5.13

**Number of adjunct FTEF:** # 1.20

**FT/PT load ratio:** 4.28

1. How do the program numbers compare to a like semester (Fall to Fall) three years ago or the previous program review?

The FTEF for Spring, 2003 and Spring, 2005 are exactly the same because we have the same offerings for these classes.

2. What do the program data indicate? Comment on any trends or unusual data.

The program data does not indicate any trends or unusual data. The FTEF and the FT/PT ratio have been stable for the last three years. Of course if one additional class was staffed by a part timer because no full timer could be found, this would noticeably skew the ratio but really would not have any meaning.

3. How does the FT/PT ratio benefit or harm the program?

The FT/PT ratio does not do anything to the program. All of the math faculty are fully qualified to teach any of these course. The part time faculty who normally teach these course have PhD's in math or

engineering and have been teaching for the math department at El Camino for years. They know just as well as the full timers what the entering students had in the pre-requisite courses.

4. Do you have a faculty mentoring program? \_\_\_\_\_ Yes      X   No  
Describe.

5. How do faculty maintain currency in their field?

Our faculty maintain currency by attending conferences such as CMC<sup>3</sup>South, AMATYC, NTCM, and MAA, take upper division and graduate courses in mathematics from a university, and do self studies that result in a Math Brown Bag presentation to other faculty (not necessarily just math.)

6. Fill in the faculty status data below and answer the questions that follow.

**Full Time Faculty Who Normally Teach Group 1 Math Courses**

Name	Reassigned time (how much in %)	Currently on leave (check)	Retired in last 2 years (check)	FT hired last 3 years (check)	Anticipated to retire in next 3 years (check)
Boerger, J					
Bollinger, A			X		
Cohen, J					
Evensizer, J					
Flaten, E				X	
Fry, G					
Hemmer, B			X		
Ho, L					
Horvath, R					
Hyman, J					
Kjeseth, L					
Lewis, R					
Meyer, T					
Numrich, K					
Sampson, A					
Seyedin, A					
Taylor, R					
Taylor, S					
Wang, L					
Wapner, L					
Yun, P					

Part Time Faculty

	Would Probably Leave If Offered A FT Position At Another CC
Martinez, J	X
Smith, S	

Safadi, O	
Zeitzew, M	
Avakyan, V	X
Awainisyn, A	

6a. How does this data impact the program?

The data does not impact the program because everyone of our instructors should be able to teach any one of these courses. They all have masters degree in math or math education. This means anyone of the ten or so instructors not listed could fill in. Any new hire could fill in.

6b. Will this data affect the program in the future?

The data will not affect the program in the future for the reasons listed in item 6a.

7. From this information, can you identify present and future staffing needs? \_\_\_\_ Yes X No  
**Explain.**

8. What is the department doing to address any future staffing needs?

There is no anticipated problems for future staffing needs because the current supply of qualified math instructors seeking full time or part time employment far exceeds the demand and no change is expected for the near future.

9. Should a recommendation be written addressing the data? \_\_\_\_ Yes X No  
**(If yes, list.)**

#### D. Planning

1. Do the program faculty and other personnel have a clear idea of what is happening in the program, where it is headed, what external changes are affecting it, and what changes need to be made in order to enable the program to adapt and continue to be successful? **Explain.**

The program for Group I is basically the same that we went through over forty years ago at Fullerton Junior College. It is the same my colleagues went through at U.C.L.A. and other colleges. The only change has been the application of technology. We do not anticipate any changes in the curriculum in the near future.

2. What data, not currently provided, would be needed in order to improve planning for the development of the program? **Explain.**

How well our students perform after they transfer to a university. Is the preparation students receive at El Camino College adequate to handle the upper division courses for which our program are prerequisites? So far all we have is anecdotal information from some of the universities our students transfer to and this information has been positive.

3. What major external changes or trends do you expect to be of particular relevance to your discipline in the next five years?

We do not see any major changes in these courses other than the use of more technology to help the students better understand the underlying theories. Publishers are offering more and more on-line supplemental material to support the texts used for these classes.

4. What will the implications of these changes or trends be for the program and how will the program need to respond?

We do not anticipate our department ever offering a totally web-based calculus course. It has been suggested by the department to offer Math 190 part lecture ( 3 hours on Saturday) and part on-line. All of the testing will be done in class.

Another proposal is to offer Math 190 and 191 two days a week. We were thinking of Saturday and Tuesday or Friday and Saturday.

According to the student survey 48% of the students never go to the instructor's office hours. We recommend that instructors hold office hours online.

5. Based upon the information above, how would you like the program to evolve within the next five years?

There are plans to try the ideas discussed in item 4 in the near future (Fall, 2007). We are skeptical about a total online calculus course. First, we believe that online calculus course is less effective for the average student than the traditional classroom calculus course. Second, it will be difficult to find out who is at the keyboard. On the other hand, we expect that more faculty will attempt to include online components in their traditional calculus course.

6. Should a recommendation be written addressing the data?        X   Yes             No  
(If yes, list.)

The dean is planning to offer Math 190 (first semester calculus) partially online for the Fall, 2007. The proposal is for the class to meet for maybe 3 hours on a Saturday and the student would spend 2 hours online.

## V. Conclusion

### 1. Prioritized Recommendations

We should continue operating as we have.

### 2. Major Needs

We have no major needs.

3. Strategies

We will continue to monitor what the four year schools are doing and attend professional conferences.

The calculus committee will continue to meet several times each semester to discuss the Group I program and how well the prerequisite classes prepare students.

# Appendix

Student Survey  
(Math 190, 191, 210, 220, 270)

Fall 2005  
El Camino College