Major Highlights

Program Dashboard Report 2005-06

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Assessment Plan

Summary of Assessment Results

Recommendations

Follow up

Mathematics
Major Highlights
January 2007

Overview

The information contained within this binder represents supporting reports and data associated with the CRC's review of the Mathematics curriculum. These documents are intended to provide a historical perspective, as well as an idea of current and future issues which may impact the short and long term viability of the curriculum.

Major Highlights

- Between 1995-96 and 2001-02 credit hour enrollment in MAT courses remained relatively steady until 2002-03 when a sharp decline occurred. Since then the number of annual credit hours has risen, but have not reached the consistent higher numbers experienced in previous years.

- During 2005-06, math sections were filled to 84.9% of capacity which is up slightly from the two prior years. Moreover, math courses run at a slightly higher capacity than the college-wide average of 83.2%.

- The percent of completed MAT sections has declined slightly in the last three years to 91.9%, but is still above the college-wide 86.6% level. In other words, during 2005-06, 9.1% (N = 57) of all offered sections) were canceled during the academic year.

- The percent of minority students enrolled in MAT courses has increased to 25.5% over the last three years, however this falls slightly below the college-wide 27.9% average.

- The percent of withdrawals from MAT courses has increased to 28.6% over the last three years and is well above the college-wide 17.8% level. Furthermore, the percent of incompletes was 1.8% for 2005-06, which is slightly above the 1.6% college-wide rate.

- The student course completion rate (students receiving a grade of "C" or higher) has increased from 46.6% in 2003-04 to 51.9% in 2005-06, yet this is still well below the 68.2% student success rate college-wide.

Oakland Community College
Program Dashboard

The purpose of the program dashboard is to provide a data driven tool designed for the systematic and objective review of all curriculum offerings. Based on a common set of measures which apply to all programs/disciplines the program dashboard facilitates the systematic identification of well performing as well as ailing curriculum so early intervention (triage) efforts can be undertaken.

In a rapidly changing economic and competitive environment it is necessary if not imperative to continually review curriculum offerings annually. Dashboard reports are a useful tool for monitoring program performance. In addition, they allow for an integrated approach for collecting, presenting, and monitoring data to meet long and short-term programmatic decision-making needs. As in an airplane, the dashboard consists of a wide variety of indicator lights to provide the "pilot" information about the overall performance of the highly complex machine.
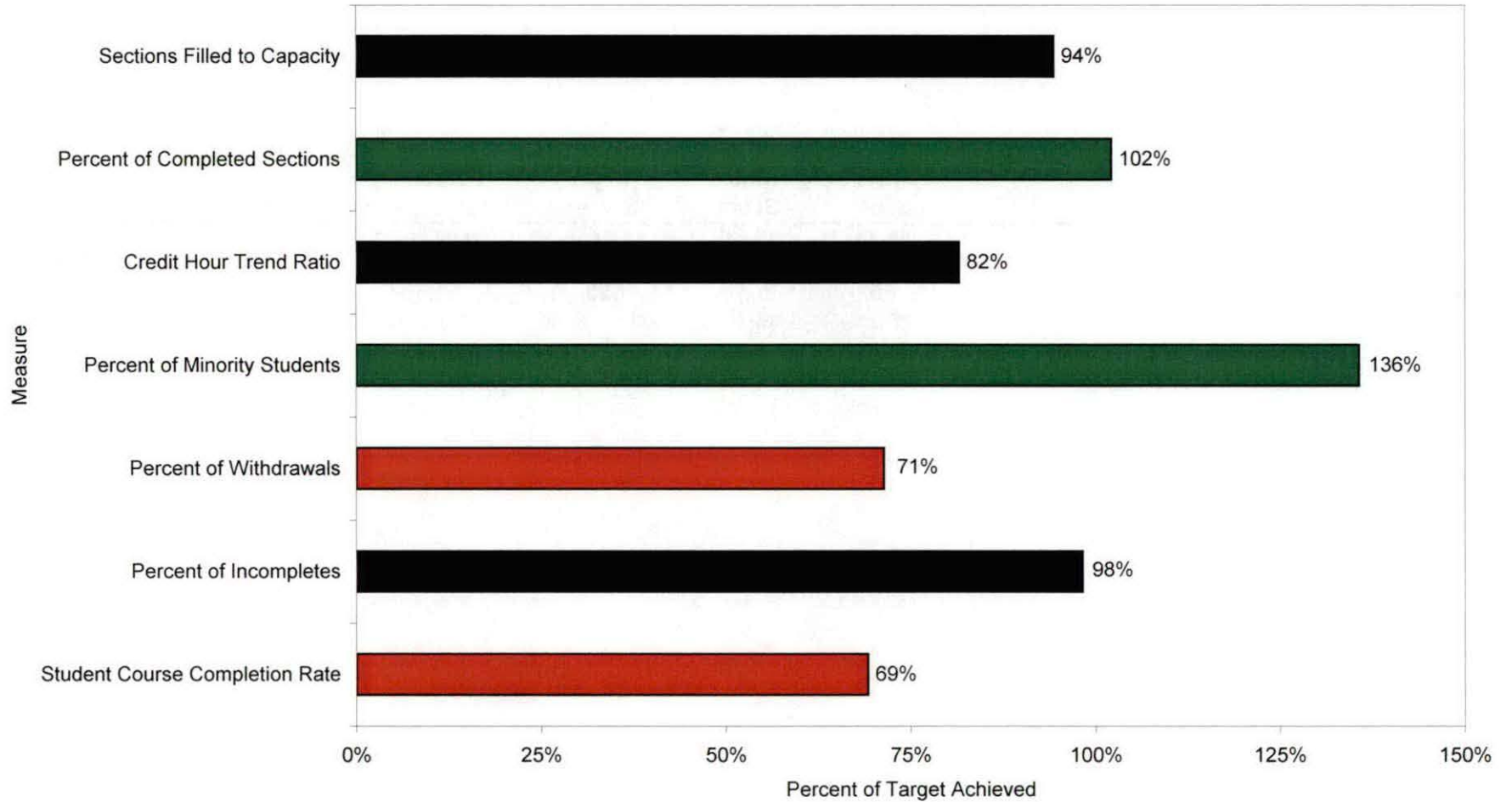
Oakland Community College
Program Dashboard Report
2005-06

Mathematics MAT
Dashboard Score: 8.69

Measures	Current Score	Benchmarks Trouble Score	Target Score	Percent of Target Achieved	Weight	Weighted Score
Sections Filled to Capacity	84.9%	75.0%	90.0%	94.3%	18.0%	1.70
Percent of Completed Sections	91.9%	75.0%	90.0%	102.1%	14.2%	1.45
Credit Hour Trend Ratio	1.02	0.71	1.25	81.6%	15.3%	1.25
Percent of Minority Students	25.5%	16.9%	18.8%	135.6%	6.1%	0.83
Percent of Withdrawals	28.6%	15.0%	0.0%	71.4%	12.0%	0.86
Percent of Incompletes	1.8%	3.0%	0.0%	98.2%	7.9%	0.78
Student Course Completion Rate	51.9%	60.0%	75.0%	69.2%	26.5%	1.83

Oakland Community College
Percent of Target Achieved
2005-06

Mathematics MAT

Measure	Percent of Target Achieved
Sections Filled to Capacity	94%
Percent of Completed Sections	102%
Credit Hour Trend Ratio	82%
Percent of Minority Students	136%
Percent of Withdrawals	71%
Percent of Incompletes	98%
Student Course Completion Rate	69%

Program Dashboard

Prefix   MAT
Title   Mathematics

	2005-06	Program 2004-05	2003-04	College Wide 2005-06
Sections Filled to Capacity	84.9%	83.3%	83.9%	83.2%
Percent of Completed Sections	91.9%	92.9%	93.6%	86.6%
Headcount Trend Ratio	1.02	0.98	0.98	1.02
Credit Hour Trend Ratio	1.02	0.98	0.98	1.02
Percent of Minority Students	25.5%	25.1%	23.9%	27.9%
Percent of Withdrawals	28.6%	27.2%	26.2%	17.8%
Percent of Incompletes	1.8%	1.6%	1.9%	1.6%
Student Course Completion Rate	51.9%	52.6%	46.6%	68.2%
Dashboard Score	8.69	8.61	8.40	

Sections Filled to Capacity

Prefix   MAT
Prefix Title   Mathematics

	2005-06	2004-05	2003-04
Total Students	15,366	15,449	15,657
Total Capacity	18,105	18,540	18,666
Sections Filled To Capacity	84.9%	83.3%	83.9%

Definition:
The percent of all available seats which are filled on the terms official census date. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term.

Methodology:
Total number of sections (credit courses only) that are filled to their designated capacity e.g. allocated seats divided by the total number of available seats in all sections throughout the academic year (July 1 through June 30). In other words, how many sections are filled to their capacity on the sections 1/10 day out of all sections? Include sections that are more than filled / overflowing in calculation.

One-Tenth Day data shows the capacity filled numbers at approximately 3 weeks after the Fall and Winter terms begin; and 1 week after the Summer I and II terms begin. This data will not provide additional enrollment data if the sections begin after the one-tenth day.

While a section may only have a few students enrolled in it the college is able to designate some sections as 'full' so that they are not cancelled (per OCCFA Master Agreement). Therefore some disciplines may show low fill capacity rates, and the college never cancelled the sections or condense the students into fewer sections offering the same course.

Percent of Completed Sections

Prefix   MAT
Prefix Title   Mathematics

	2005-06	2004-05	2003-04
Active Sections	650	820	656
Cancelled Sections	57	58	45
Total Sections	707	883	701
Percent of Completed Sections	91.9%	92.9%	93.6%

Definition:
Of all offered sections, the percent of sections that are completed (not cancelled). Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session, after grades are posted.

Methodology:
Annually, the total number of offered credit sections that are completed. Formula = number of completed credit sections divided by the total number of offered credit sections. In other words, the percent of these sections that are not cancelled.

Headcount Trend Ratio

Prefix   MAT
Prefix Title   Mathematics

	2005-06	2004-05	2003-04
Headcount Year 1	14,521	16,594	16,740
Headcount Year 2	15,657	14,521	16,594
Headcount Year 3	15,511	15,657	14,521
Headcount Year 4	15,377	15,511	15,657
Headcount Period 1	15,230	15,591	15,952
Headcount Period 2	15,515	15,230	15,591
Headcount Ratio	1.02	0.98	0.98

Definition:
Trend in student headcount based on a three year rolling average. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term. (Note: this measure is not used in the calculation of the Program Dashboard score since it parallels trends depicted in Credit Hours.)

Methodology:
In order to establish a meaningful enrollment statistic which applies to large as well as small disciplines/programs a "ratio" was calculated based on a three year rolling average of student headcount.

The formula used to calculate this measure involves three simple steps:

a. Year 1 + Year 2 + Year 3 / 3 = Period 1
b. Year 2 + Year 3 + Year 4 / 3 = Period 2
c. Period 2 / Period 1 = Ratio

If the ratio is greater than "1" this means there has been an enrollment increase. On the other hand, if the ratio is less than "1" this translates into an enrollment decline. The larger the number the larger the enrollment increase. Likewise, the lower the number the greater the enrollment decline.

Credit Hour Trend Ratio

Prefix   MAT
Prefix Title   Mathematics

	2005-06	2004-05	2003-04
Credit Hour Year 1	56,844	64,970	65,527
Credit Hour Year 2	61,189	56,844	64,970
Credit Hour Year 3	60,500	61,189	56,844
Credit Hour Year 4	59,976	60,500	61,189
Credit Hour Period 1	59,511	61,001	62,447
Credit Hour Period 2	60,555	59,511	61,001
Credit Hour Ratio	1.02	0.98	0.98

Definition:
Trend in student credit hours based on a three year rolling average. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term.

Methodology:
In order to establish a meaningful enrollment statistic which applies to large as well as small disciplines/programs a "ratio" was calculated based on a three year rolling average of student credit hours.

The formula used to calculate this measure involves three simple steps:

a. Year 1 + Year 2 + Year 3 / 3 = Period 1
b. Year 2 + Year 3 + Year 4 / 3 = Period 2
c. Period 2 / Period 1 = Ratio

If the ratio is greater than "1" this means there has been an enrollment increase. On the other hand, if the ratio is less than "1" this translates into an enrollment decline. The larger the number the larger the enrollment increase. Likewise, the lower the number the greater the enrollment decline.

<p style="text-align:center">Percent of Minority Students</p>

Prefix   MAT
Prefix Title   Mathematics

	2005-06	2004-05	2003-04
Minority Students	2,811	2,857	2,739
Total Students	11,020	11,397	11,474
Percent of Minority Students	25.5%	25.1%	23.9%

Definition:
The percent of students who are minority. Minority status is self-reported by the student and includes: African American, Asian, Hispanic, Native American Indian and Other. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term.

Methodology:
Percentages are based on those students enrolled on the terms official census date (one tenth day) and excludes missing data.

<div align="center">Percent of Withdrawals</div>

Prefix   MAT
Prefix Title   Mathematics

	2005-06	2004-05	2003-04
Total Withdrawals	4,336	4,117	3,806
Total Grades	15,146	15,122	14,532
Percent of Withdrawals	28.6%	27.2%	26.2%

Definition:
The percent of students who withdraw from their course after the term begins. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

Methodology:
Percent of withdrawals is derived by dividing the total number of student initiated withdrawals by the total number of grades and marks awarded throughout the academic year. The Withdrawal-Passing (WP), and Withdrawal-Failing (WF) are considered Withdrawals (W). Meanwhile, calculations exclude: Audit (AU), Not Attended (N), and Not Reported (NR).

Percent of Incompletes

Prefix   MAT
Prefix Title   Mathematics

	2005-06	2004-05	2003-04
Total Incompletes	266	242	272
Total Grades	15,146	15,122	14,532
Percent of Incompletes	1.8%	1.6%	1.9%

Definition:
The percent of students who receive an incomplete in their course. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

Methodology:
Percent of incompletes is derived by dividing the total number of incompletes by the total number of grades and marks awarded throughout the academic year. The Continuous Progress (CP) grade is considered an Incomplete (I). Meanwhile, calculations exclude: Audit (AU), Not Attended (N), and Not Reported (NR).

Student Course Completion Rate

Prefix   MAT
Prefix Title   Mathematics

	2005-06	2004-05	2003-04
Successful Grades	7,855	7,960	6,767
Total Student Grades	15,146	15,122	14,532
Student Course Completion Rate	51.9%	52.6%	46.6%

Definition:
The percent of students who successfully complete a course with a grade of "C" or higher.
Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

Methodology:
Student success rates are based on end of session data after all grades have been posted. Data includes grades from the entire academic year (Summer II, Fall, Winter, and Summer I). The following grades/marks are excluded from the calculation: Audit (AU), Not Attended (N) and Not Reported (NR).

OAKLAND
COMMUNITY
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Credit Hour Trends Report
Mathematics
MAT
2005-06

Prepared by:

Oakland Community College

Office of Institutional Research

December 20, 2006

Oakland Community College
Credit Hour Trends Report
Mathematics
1995-96 through 2005-06

Each year the Office of Institutional Research prepares the Credit Hour Trends Report, based on data submitted to the State of Michigan in the annual ACS-6 (Activities Classification Structure) process. This report is based on each course section's official count date (1/10th Day). The Credit Hour Trends Report examines annual (July 1 - June 30) enrollment trends of OCC disciplines, based on course prefix codes.

Trends over a specified period of time are illustrated by the following graphs for Mathematics.

- Graph depicting ten-year trend in student credit hours generated by Mathematics

- Graphs depicting three-year moving mean and rate of change in student credit hours for Mathematics.

- Ten-year trend in annual credit hours generated Collegewide.

Questions regarding this report can be forwarded to the Office of Institutional Research at (248) 341-2123.

Oakland Community College
Ten-Year Trend in Student Credit Hours
## Mathematics
1995-96 through 2005-06

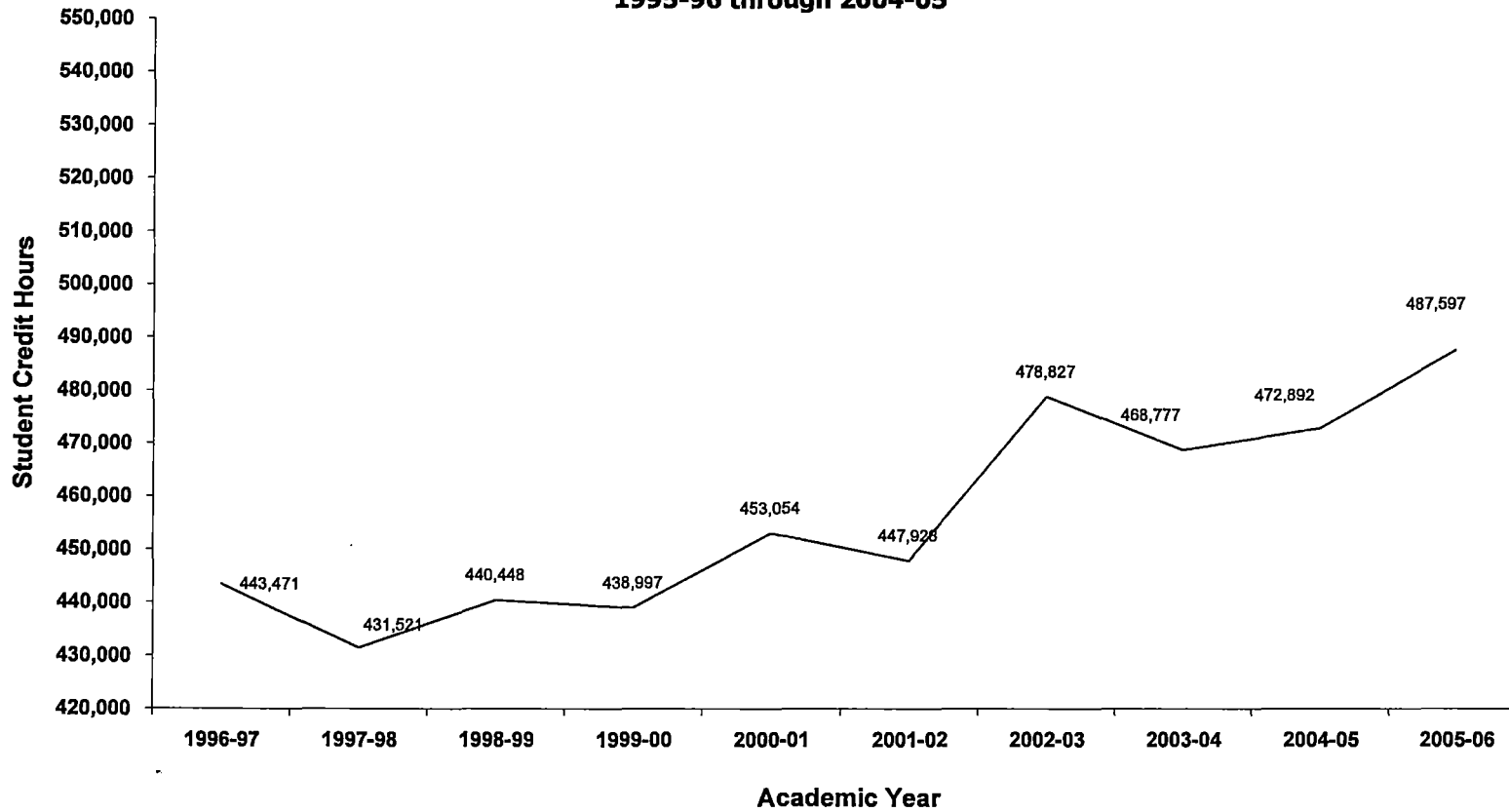|	1995-96 SCH	1996-97 SCH	1997-98 SCH	1998-99 SCH	1999-00 SCH	2000-01 SCH	2001-02 SCH	2002-03 SCH	2003-04 SCH	2004-05 SCH	2005-06 SCH	5-Year % Change	10-Year % Change
Mathematics	64,296	62,911	63,930	63,712	63,061	63,507	62,036	56,454	59,848	60,031	59,765	-5.9	-7.0
College Wide Totals	451,159	443,471	431,521	440,448	438,997	453,054	447,928	478,827	468,777	472,892	487,597	7.6	8.1
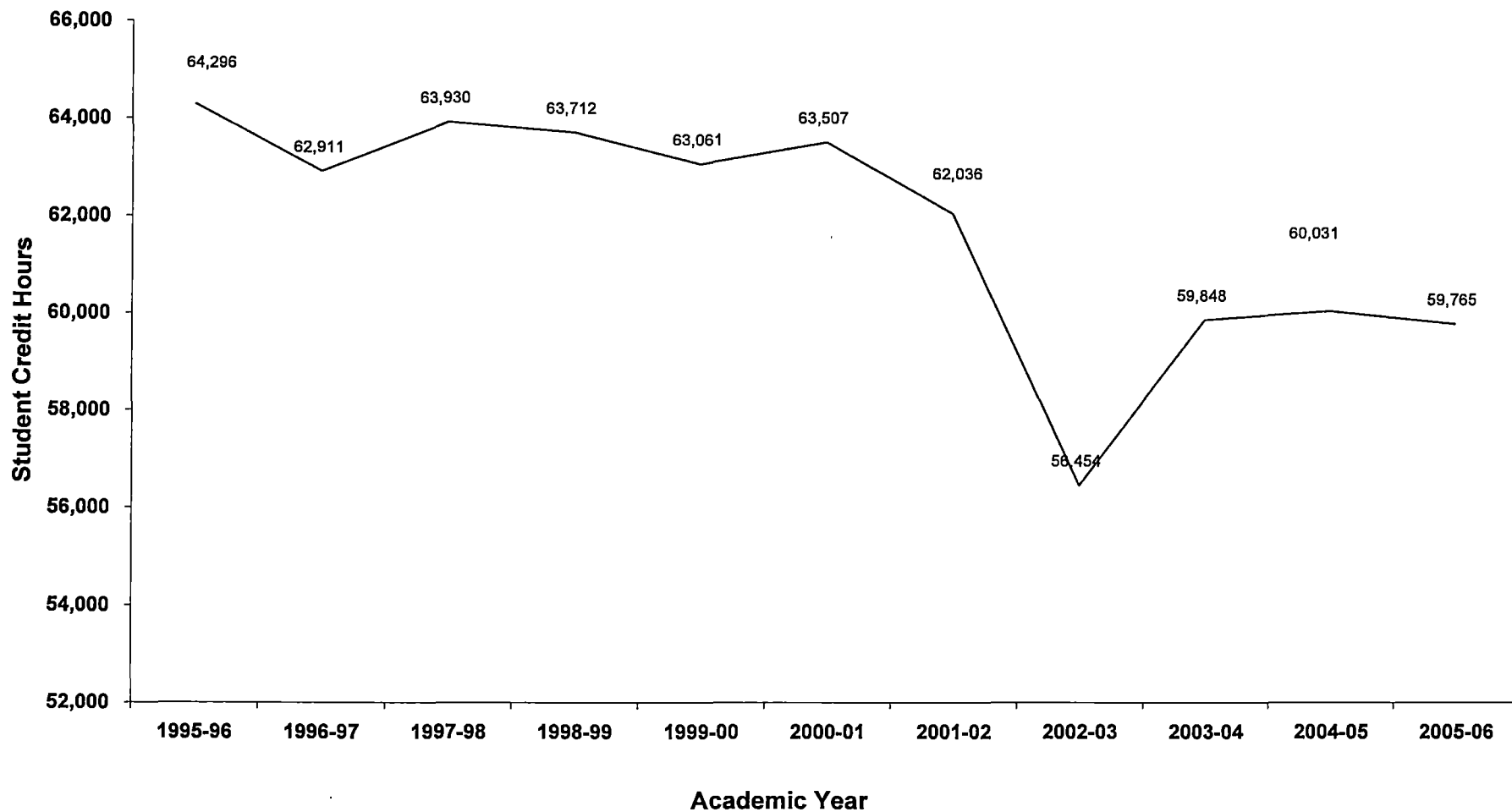
Oakland Community College
Three-Year Moving Mean
Mathematics
1996-97 through 2004-05
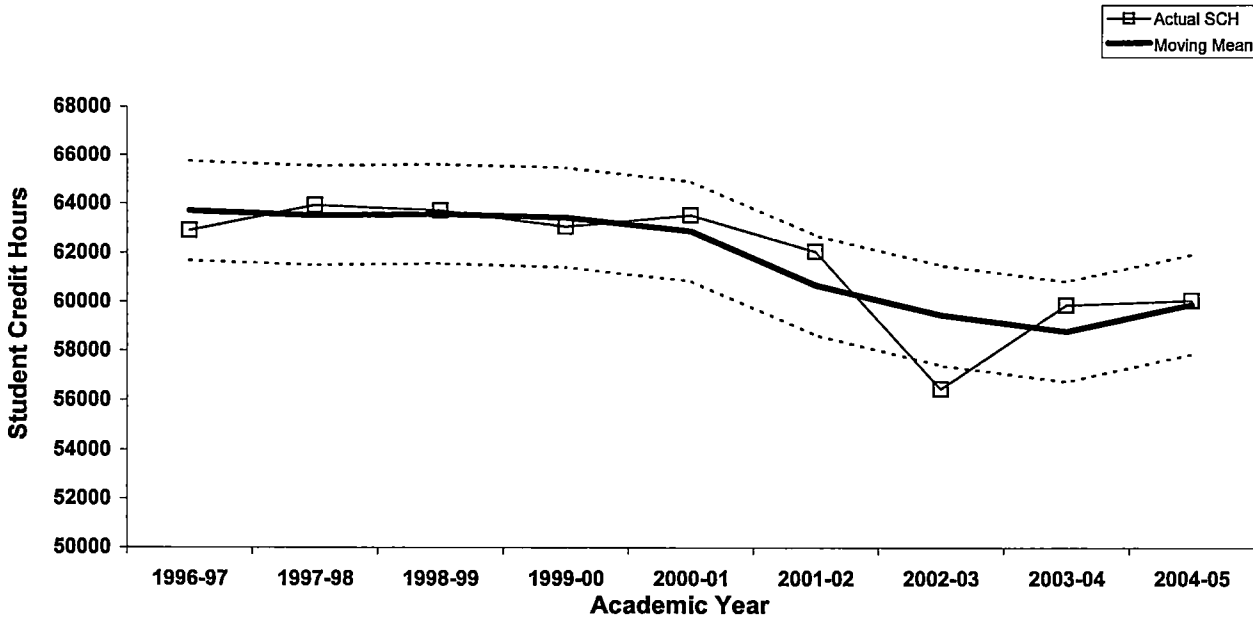
Rate of Change in Student Credit Hours 1996-97 through 2005-06
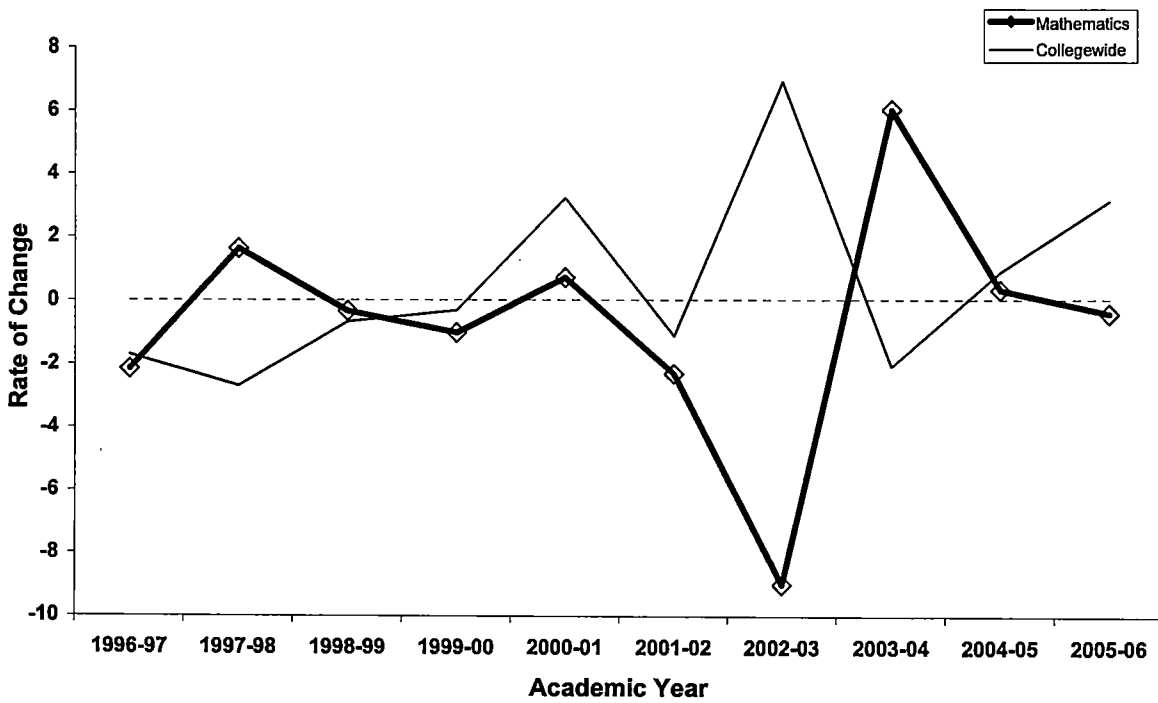
Oakland Community College
Ten-Year Trend in Student Credit Hours
College-Wide
1995-96 through 2004-05

Student Credit Hours (Y-axis) vs Academic Year (X-axis)

Year	Value
1996-97	443,471
1997-98	431,521
1998-99	440,448
1999-00	438,997
2000-01	453,054
2001-02	447,928
2002-03	478,827
2003-04	468,777
2004-05	472,892
2005-06	487,597

Academic Year

1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
443,471	431,521	440,448	438,997	453,054	447,928	478,827	468,777	472,892	487,597

**OAKLAND
COMMUNITY
COLLEGE**

CRC Mathematics Review
Janet Peart-faculty
May 18, 2007

Recommendations:

- Catalogue course descriptions all need some level of revision (look at content and topics)
- In the course descriptions, math needs to remove the word replaces where necessary and add ACT scores to pre-requisites
- Take course description revisions to fall discipline day and then to the Curriculum Committee
- There needs to be a discussion with the Technology Department regarding the math classes they teach
- In the analysis of 235 classes, the math discipline recognized that 60% of developmental math classes are taught by adjunct faculty. How does the math discipline meet /support the needs of adjuncts and students? Who monitors adjunct faculty who teach developmental classes? CRC recommends a math discipline coordinator to review/monitor developmental courses and adjunct faculty. The coordinator could complete syllabi review.
- CRC recommends that PDTC train full-time faculty and ASC on how to support adjunct faculty
- There needs to be so system in place for coordination/consistency of developmental math. Math Deans from each campus can work with Math department chairs to coordinate this issue
- CRC recommends that Math 1100 and lower be taught in less than four hour blocks (refer concerns to Scheduling Task Force)
- All faculty need to be reminded of the requirements for their syllabi
- From the Dashboard Data a review needs to be completed to determine if Withdrawals were due to one time per week offering or other scheduling issues
- CRC recommends the ASC have a dedicated math/science faculty
- Need consistency of Math labs across the college
- Math could use SI leaders in classes and offer seminar on certain subject areas /or videos
- It would enhance learning if the computer area was near the math since software is utilized in some classes
- Faculty need to be updated on the software and need ITs support.
- PASS needs to be open in evenings till 8 pm to better serve the developmental population
- The math discipline need to investigate use of manipulatives or paired classes
- The math discipline requests more discipline specific training and best practices for assessments.