Los Medanos College

Program Review Data for

Biological Science

Prepared by the Office of Institutional Research

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Background

This report provides the department with three-year trends on indicators on the following areas:

- Enrollment
- Productivity
- Student Success

For Vocational Education programs, data on VTEA core indicators are provided.

I. Enrollment: This section provides a three-year trend on student enrollment by headcount as of first census. Because our demographic make up is rapidly changing, figures by ethnicity are also provided.

II. Productivity: In this section, three-year trends are provided for: FTEF/FTES, FTES, Part-time FTEF, full-time FTEF, and full-time Staff. For most measures, college figures are provided for comparison purposes.

III. Student Success. This section consists of: Retention Rates, Success rates, number of students with declared major who completed 18 units or more, and number of degrees and certificates awarded. In this section, statistics by ethnicity are also provided.

Note: ALL DATA is for the academic year (Fall and Spring only).

Definitions for each measure are provided in the footnotes.

Data Sources: The two main sources of information are: 1. DataTel and the Research Data Warehouse. Productivity figures were provided by the Business Office.

HEADCOUNT ENROLLMENT (Unduplicated at Census): Student headcount in Biological Science increased from 1799 in 2002-2003 to 1992 in 2004-2005, an increase of 193 students in the last three years. During this three-year period, the proportion of Asians increased by 2%, African-Americans by 1% and Hispanics by 3%. Whites decreased by 1%.

The ethnic composition of students in the program has reflected well the ethnic composition of the students in the institution in the last three years.

Headcount Enrollment: Biological Science

	2002-2003		2003-2004		2004-2005		3-Year Change	
	Program	**College**	**Program**	**College**	**Program**	**College**	**Program**	**College**
	N=1799	N=12946	**N=1910**	N=11527	**N=1992**	N=12808	**+193**	-138
							+11%	**-1%**
Asian	**5%**	5%	**6%**	6%	**7%**	6%	**2%**	1%
African American (non-Hispanic)	**12%**	13%	**12%**	13%	**13%**	14%	**1%**	1%
Filipino	**10%**	6%	**10%**	6%	**10%**	6%	**0%**	0%
Hispanic	**20%**	21%	**22%**	23%	**23%**	24%	**3%**	3%
American Indian/ Alaskan Native	**1%**	1%	**1%**	1%	**1%**	1%	**0%**	0%
Other Non-White	**3%**	3%	**2%**	3%	**3%**	2%	**0%**	-1%
Pacific Islander	**1%**	1%	**1%**	1%	**1%**	1%	**0%**	0%
White non-Hispanic	**43%**	44%	**42%**	43%	**42%**	43%	**-1%**	-1%
Unknown	**5%**	7%	**4%**	5%	**2%**	3%	**-3%**	-4%
All Students	**100%**	100%	**100%**	100%	**100%**	100%	**-**	-

NOTE: Percentages may not add up to 100% due to rounding.

SEATCOUNT ENROLLMENT (Duplicated at Census): Seatcount enrollment for Biological Science increased from 2265 in 2002-2003 to 2490 in 2004-2005, an increase of 225 students. When examined by ethnicity, seatcount enrollment increased for Asians by 1% and for African-Americans and Hispanics by 2%. Seatcount enrollment decreased for Filipinos and Whites by 2%. The program's seatcount ethnic composition enrollment generally reflects the ethnic composition of the college's seatcount enrollment. However, a slight under-representation of African-Americans and a slight over representation of Filipinos is observed.

Seatcount Enrollment: Biological Science

	2002-2003		2003-2004		2004-2005		3-Year Change	
	Program	**College**	**Program**	**College**	**Program**	**College**	**Program**	**College**
	N=2265	N=43127	**N=2400**	N=40792	**N=2490**	N=42549	**+225**	-578
							+10%	**-1%**
Asian	**6%**	5%	**6%**	6%	**7%**	6%	**1%**	1%
African American (non-Hispanic)	**11%**	14%	**11%**	14%	**13%**	15%	**2%**	1%
Filipino	**12%**	6%	**11%**	6%	**10%**	6%	**-2%**	0%
Hispanic	**20%**	20%	**23%**	22%	**22%**	24%	**2%**	4%
American Indian/ Alaskan Native	**1%**	1%	**1%**	1%	**1%**	1%	**0%**	0%
Other Non-White	**3%**	3%	**2%**	3%	**3%**	3%	**0%**	0%
Pacific Islander	**1%**	1%	**1%**	1%	**1%**	1%	**0%**	0%
White non-Hispanic	**43%**	43%	**42%**	43%	**41%**	43%	**-2%**	0%
Unknown	**5%**	7%	**4%**	5%	**2%**	2%	**-3%**	-5%
All Students	**100%**	100%	**100%**	100%	**100%**	100%	**-**	-

NOTE: Percentages may not add up to 100% due to rounding.

PRODUCTIVITY: Productivity (FTES/FTEF) for LMC's Biological Science program has stayed relatively high with an average of 22.3 for the last three years. When compared to Contra Costa College's Biology Program, the productivity figure for LMC's program is higher by about 3. No data was available for DVC.

FTES/FTEF: Biological Science

	2002-2003	2003-2004	2004-2005	Change
Program	22.5	23.0	22.3	-.2
CCC*	19.4	19.4	18.3	-1.1
DVC*	n/a	n/a	8.6	
State Average				

Productivity (FTES/FTEF) is defined as the average number of FTES earned per full-time equivalent instructor.
FTES is defined as 525 student contact hours, based on a 15 hour weekly course load for 2 semester at 17.5 weeks per semester (15x2x17.5=525).
*Data obtained from COGNOS.

FTEF: Full- and part-time faculty have increased in the last three years: Full-time faculty increased by .9 and part-time faculty by .6. Full-time classified has stayed constant at 1.83 for the last three years.

FTEF: Biological Science

	2002-2003	2003-2004	2004-2005	Change
FT FTEF	4.9	5.1	5.8	+.9
PT FTEF	5.3	5.6	5.9	+.6
Classified FTEF*	1.83	1.83	1.83	0

* Augmented with short term hourly

RETENTION RATES: Retention rate for students in the Biological Sciences program has decreased from 81% in 2002-2003 to 78% in 2004-2005, a 3% decrease. When compared to the college average, the retention rate for the program has been slightly lower for the last three years (78% VS 82% in 2004-2005).

When examining retention rates by ethnicity for the last three years, it is observed that the retention rate for Asians increased by 12%. The retention rates for African-Americans decreased by 5%, for Filipinos by 4%, for Hispanics by 5%, and for Whites by 2%.

Retention Rates: Biological Science

	2002-2003		2003-2004		2004-2005		3-Year Change	
	Program	College	Program	College	Program	College	Program	College
	2,957	47,311	2,404	41,959	2,518	42,937	-439	-4,374
Asian	**72%**	84%	**80%**	84%	**84%**	87%	**12%**	3%
African American (non-Hispanic)	**70%**	73%	**70%**	73%	**65%**	72%	**-5%**	-1%
Filipino	**84%**	84%	**82%**	84%	**80%**	82%	**-4%**	-2%
Hispanic	**80%**	82%	**77%**	81%	**75%**	82%	**-5%**	0%
American Indian/ Alaskan Native	**76%**	80%	**74%**	84%	**78%**	81%	**2%**	1%
Other Non-White	**80%**	81%	**88%**	80%	**82%**	79%	**2%**	-2%
Pacific Islander	**93%**	81%	**73%**	82%	**71%**	80%	**-22%**	-1%
White Non-Hispanic	**84%**	84%	**83%**	85%	**82%**	84%	**-2%**	0%
Unknown	**88%**	84%	**79%**	81%	**82%**	83%	**-6%**	-1%
All LMC Students	**81%**	82%	**80%**	82%	**78%**	82%	**-3%**	0%
State Average		83%		83%		83%		0%

DEFINITION: Student is retained in the course to end of term. A, B, C, D, F, CR, NC, I grade notations.
MEASUREMENT: Percent of students retained in courses out of total enrolled in courses. The retention rate is calculated by dividing the numerator (number of students with A, B, C, D, F, CR, NC, I) by the denominator (number of students with A, B, C, D, F, CR, NC, W, I).

SUCCESS RATES: Success rate for students in the Biological Sciences program has decreased from 67% in 2002-2003 to 64% in 2004-2005, a 3% decrease. When compared to the college average, the retention rate for the program has been lower by 3% for the last two years (64% VS. 67% in 2004-2005).

When examining success rates by ethnicity for the last three years, it is observed that the success rate for Asians increased by 1%. The success rates for African-Americans decreased by 4%, for Filipinos by 3%, for Hispanics by 2%, and for Whites by 2%.

Success Rates: Biological Science

	2002-2003		2003-2004		2004-2005		3-Year Change	
	Program	College	Program	College	Program	College	Program	College
	2,957	47,311	2,404	41,959	2,518	42,937	-439	-4,374
Asian	63%	71%	67%	72%	64%	74%	1%	3%
African American (non-Hispanic)	48%	51%	47%	51%	44%	50%	-4%	-1%
Filipino	70%	70%	71%	71%	67%	70%	-3%	0%
Hispanic	62%	65%	59%	66%	60%	66%	-2%	1%
American Indian/ Alaskan Native	72%	69%	68%	70%	61%	64%	-11%	-5%
Other Non-White	62%	61%	76%	65%	67%	65%	5%	4%
Pacific Islander	78%	63%	60%	61%	47%	61%	-31%	-2%
White Non-Hispanic	73%	72%	72%	74%	71%	72%	-2%	0%
Unknown	72%	69%	62%	66%	73%	67%	1%	-2%
All Students	67%	67%	65%	68%	64%	67%	-3%	0%
State Average		67%		67%		67%		0%

DEFINITION: Student succeeds in the course to end of term. A, B, C, CR grade notations.
MEASUREMENT: Percent of students successful in courses out of total enrolled in courses. The success rate is calculated by dividing the numerator (number of students with A, B, C, CR) by the denominator (number of students with A, B, C, D, F, CR, NC, W, I).

NUMBER OF STUDENTS WITH DELCARED MAJOR WHO COMPLETED 18 UNTS OR MORE: The number of students with Biological Science as their major and with 18 units or more has decreased from 27 in 2002-2003 to 11 in 2004-2005, a decrease of 16 students.

Number of Students with Declared Major who Completed 18 Units or More: Biological Science

	2002-2003	2003-2004	2004-2005	3-Year Change
	N=27	N=38	N=11	-16
Asian	11%	11%	0%	-11%
African American (non-Hispanic)	11%	16%	0%	-11%
Filipino	0%	5%	9%	9%
Hispanic	19%	21%	36%	17%
American Indian/ Alaskan Native	0%	0%	0%	0%
Other Non-White	4%	8%	0%	-4%
Pacific Islander	0%	0%	0%	0%
White Non-Hispanic	44%	34%	55%	11%
Unknown	11%	5%	0%	-11%
All Students	100%	100%	100%	-

NOTE: Percentages may not add up to 100% due to rounding.

NUMBER OF DEGREES AND CERTIFICATES: A total of 21 Associate degrees have been awarded in the last three years, an average of 7 per year.

Number of Degrees and Certificates: Biological Science

	2002-2003	2003-2004	2004-2005	3-Year Change
Degrees	8	7	6	-2
Certificates	n/a	n/a	n/a	n/a