

Los Medanos College

Program Review Data for

Physical Science/ Physics/ Engineering

Prepared by the Office of Institutional Research

August 2006

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.

STATISTICS

HEADCOUNT ENROLLMENT (Unduplicated at Census): Student headcount in Physical Science decreased from 315 in 2002-2003 to 257 in 2004-2005, a decrease of 58 students in the last three years.

In the last three years, Asians increased by 4%, Filipinos by 2% and Whites by 3%. Hispanics decreased by 2% in the last three years. The ethnic composition of students in the program has generally reflected the ethnic composition of the students in the institution in the last three years except for Hispanics. Hispanics have been slightly under represented and that gap seems to increase.

Headcount Enrollment: Physical Science/ Physics/ Engineering

	2002-2003		2003-2004		2004-2005		3-Year Change	
	Program	College	Program	College	Program	College	Program	College
	N=315	N=12946	N=274	N=11527	N=257	N=12808	-58	-138
							-18%	-1%
Asian	6%	5%	8%	6%	10%	6%	4%	1%
African American (non-Hispanic)	11%	13%	15%	13%	11%	14%	0%	1%
Filipino	8%	6%	7%	6%	10%	6%	2%	0%
Hispanic	19%	21%	18%	23%	17%	24%	-2%	3%
American Indian/ Alaskan Native	2%	1%	2%	1%	0%	1%	-2%	0%
Other Non-White	4%	3%	4%	3%	2%	2%	-2%	-1%
Pacific Islander	1%	1%	2%	1%	1%	1%	0%	0%
White non-Hispanic	43%	44%	38%	43%	46%	43%	3%	-1%
Unknown	6%	7%	7%	5%	1%	3%	-5%	-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 in Physical Sciences decreased from 359 in 2002-2003 to 303 in 2004-2005, a decrease of 56 seats for the last three years. When examined by ethnicity, seatcount enrollment increased for Asians by 6% and for Filipinos and Whites by 3%. Seatcount enrollment decreased for African-Americans by 1% and for Hispanics by 3%.

Seatcount Enrollment: Physical Science/ Physics/ Engineering

	2002-2003		2003-2004		2004-2005		3-Year Change	
	Program	College	Program	College	Program	College	Program	College
	N=359	N=43127	N=324	N=40792	N=303	N=42549	-56	-578
							-16%	-1%
Asian	7%	5%	10%	6%	13%	6%	6%	1%
African American (non-Hispanic)	10%	14%	14%	14%	9%	15%	-1%	1%
Filipino	8%	6%	9%	6%	11%	6%	3%	0%
Hispanic	20%	20%	17%	22%	17%	24%	-3%	4%
American Indian/ Alaskan Native	2%	1%	3%	1%	0%	1%	-2%	0%
Other Non-White	4%	3%	4%	3%	2%	3%	-2%	0%
Pacific Islander	1%	1%	2%	1%	1%	1%	0%	0%
White non-Hispanic	42%	43%	36%	43%	45%	43%	3%	0%
Unknown	8%	7%	7%	5%	1%	2%	-7%	-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 Physical Science program has decreased from 16.9 in 2002-2003 to 12.0 in 2004-2005, a decrease of 4.9 in the last three years. When compared the productivity of LMC's Physical Science to DVC's, LMC's was higher for two years, except in 2004-2005, it was lower by 2.2.

Physical Science/ Physics/ Engineering: FTES/FTEF

	2002-2003	2003-2004	2004-2005	Change
LMC Program	11.0	11.6	10	-1.0
CCC*	7.6	7.7	7.4	-.2
DVC*	14.2	15.0	14.5	+.3
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-time faculty increased by .4 in the last three years; Part-time faculty decreased by .20. Full-time classified has been unchanged for the last three years at 1.0 FTEF.

Physical Science/ Physics/ Engineering: FTEF

	2002-2003	2003-2004	2004-2005	Change
FT FTEF**	5.4	5.8	5.8	+.4
PT FTEF **	2.1	1.6	1.9	-.2
Classified FTEF	1.0	1.0	1.0	0

** Data provided for Physical Science Dept. (Includes Chemistry and Astronomy)

RETENTION RATES: Retention Rate for students in the program has decreased from 75% in 2002-2003 to 72%, a 3% decrease in the last three years. When compared to the college average, the retention rate has been generally lower. In 2004-2005 it was 10% lower (72% VS. 82%).

When examining retention rates by ethnicity for the last three years, it is observed that the retention rate for Asians increased by 7%, for Filipinos by 20% and for Pacific Islanders by 35%. The retention rates for African-Americans decreased by 20%, for Hispanics by 3% and for Whites by 5%. It is important to note that the retention rate for African-Americans is consistently lower than the rates of other students.

Retention Rates: Physical Science/ Physics/ Engineering

	2002-2003		2003-2004		2004-2005		3-Year Change	
	Program	College	Program	College	Program	College	Program	College
	470	47,311	324	41,959	308	42,937	-162	-4,374
Asian	83%	84%	66%	84%	90%	87%	7%	3%
African American (non-Hispanic)	57%	73%	36%	73%	37%	72%	-20%	-1%
Filipino	71%	84%	83%	84%	91%	82%	20%	-2%
Hispanic	76%	82%	58%	81%	73%	82%	-3%	0%
American Indian/ Alaskan Native	88%	80%	89%	84%	0%	81%	-88%	1%
Other Non-White	90%	81%	85%	80%	75%	79%	-15%	-2%
Pacific Islander	40%	81%	60%	82%	75%	80%	35%	-1%
White Non-Hispanic	74%	84%	72%	85%	69%	84%	-5%	0%
Unknown	86%	84%	67%	81%	100%	83%	14%	-1%
All LMC Students	75%	82%	66%	82%	72%	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 program has remained about the same (67%) in the last three years, with the exception in 2003-2004. That year the success rate decreased to 61%. When compared to the college average, the success rate has been generally the same (67%).

When examining success rates by ethnicity for the last three years, it is observed that the success rate for Asians increased by 8%, for Filipinos by 12%, for Hispanics by 3% and for Pacific Islanders by 10%. The success rates for African-Americans decreased by 15% and for Whites by 1%. It is important to note that the success rate for African-Americans has been consistently lower than the rates of other students.

Success Rates: Physical Science/ Physics/ Engineering

	2002-2003		2003-2004		2004-2005		3-Year Change	
	Program	College	Program	College	Program	College	Program	College
	470	47,311	324	41,959	308	42,937	-162	-4,374
Asian	77%	71%	66%	72%	85%	74%	8%	3%
African American (non-Hispanic)	52%	51%	32%	51%	37%	50%	-15%	-1%
Filipino	69%	70%	83%	71%	81%	70%	12%	0%
Hispanic	66%	65%	56%	66%	69%	66%	3%	1%
American Indian/ Alaskan Native	88%	69%	89%	70%	0%	64%	-88%	-5%
Other Non-White	63%	61%	85%	65%	63%	65%	0%	4%
Pacific Islander	40%	63%	40%	61%	50%	61%	10%	-2%
White Non-Hispanic	66%	72%	65%	74%	65%	72%	-1%	0%
Unknown	81%	69%	62%	66%	100%	67%	19%	-2%
All Students	67%	67%	61%	68%	67%	67%	0%	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:

No major is offered in Physical Sciences, Physics, or Engineering.

**Number of Students with Declared Major who Completed 18 Units or More:
Physical Science/ Physics/ Engineering**

	2002-2003	2003-2004	2004-2005	3-Year Change
Asian				
African American (non-Hispanic)				
Filipino				
Hispanic				
American Indian/ Alaskan Native		No Major		
Other Non-White				
Pacific Islander				
White Non-Hispanic				
Unknown				
All Students				

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

NUMBER OF DEGREES AND CERTIFICATES: No Associate degrees or certificates have been awarded.

Number of Degrees and Certificates: Physical Science/ Physics/ Engineering

	2002-2003	2003-2004	2004-2005	3-Year Change
Degrees	n/a	n/a	n/a	n/a
Certificates	n/a	n/a	n/a	n/a