

**PART II – PROJECT DESIGN**

*The Outcomes, Objectives and Goals for the STEM Transfer Velocidad are Clearly Stated and Measurable.*

**OUTCOME OBJECTIVES IN RESPONSE TO CORE NEED OF TARGET POPULATION AND GAPS:**

<b>OBJECTIVE 1:</b> Through development of a strong STEM pipeline, increase by 5% per year over the duration of the grant the numbers of LMC students seeking degrees in STEM fields, compared to the 2009 baselines.						
STEM Degree Seeking Students	2010 Baseline	Annual Targets				
		2011-12	2012-13	2013-14	2014-15	2015-16
All Students	342	359	377	396	415	436
Hispanic Student	82	86	90	94	100	105
<b>OBJECTIVE 2:</b> Beginning grant year two, increase the number of LMC students who attain STEM degrees by 15% per year.						
STEM DEGREES	2009 Baseline	Annual Targets				
		2011-2012	2012-13	2013-14	2014-15	2015-16
Total Students Awarded STEM DEGREES	10	19	24	30	38	45
Hispanic Students Awarded STEM Degrees	6	8	11	14	19	25
<b>OBJECTIVE 3:</b> By 2015, double the number of LMC student who transfer to the University of California or the California State University systems in STEM; and more than triple the number of Hispanic STEM.						
STEM TRANSFERS	2009 Baseline	Annual Targets				
		2011-12	2012-13	2013-14	2014-15	2015-16
All Students	45	50	55	61	66	73
Hispanic Student	9	11	14	18	23	29
<b>OBJECTIVE 4:</b> By 2016, LMC will have made significant progress in overcoming the gaps in articulation deficiencies documented in the NEED section of the proposal by completing a minimum of 35 new STEM course articulations with four-year universities, including the courses targeted below.						
		<i>Baseline Articulation</i>		<i>2016 Target</i>		
UC Berkeley	Civil Engineering	10/16		+3 course articulations		
Sonoma State	Engineering Science	No classes articulated		+4 course articulations		
CSU East Bay	Computer Science B.S.	5/8		+3 course articulations		
San Francisco State	Chemistry B.S.	11/16		+3 course articulations		
San Jose State	Electrical Engineering	8/13		+ 3 course articulations		
CSU Sacramento	Engineering	12/19		+ 4 courses articulations		

**The Outcome Objectives and the Project Goals support achievement of both *Absolute Priorities*: (1) increased STEM degrees, (2) STEM transfer and articulation agreements and the *Competitive Priority*: “Enabling more data-based decision-making.”**

Project Goals	Strategy Responses
1. Partner with 4 high Hispanic enrolled feeder high schools to implement programs to achieve STEM-student college readiness.	<ul style="list-style-type: none"> <li>● Establish MESA-like STEM Programs at Antioch, Deer Valley, Liberty and Pittsburg High Schools to prepare students for college-level STEM to serve 200+ students per year. (p.19)</li> <li>● Provide concurrent enrollment math classes for 50+ Hispanic and low-income HS students to serve 50+ students per year. (p.20)</li> </ul>
2. Shorten the time it takes students to complete the development of college level math sequences.	<ul style="list-style-type: none"> <li>● Pilot and institutionalize accelerated Math Path/STEM Path programs to serve 110+ students per year. (p.21)</li> <li>● Utilize technology to accelerate math learning. (p.22)</li> </ul>
3. Upgrade Science lab instrumentation/experimentation to parallel lower division courses at four-year transfer schools.	<ul style="list-style-type: none"> <li>● Establish first multi-disciplinary science lab equipped with state-of-the-art equipment at the LMC Brentwood Center to serve students per year. (p.23)</li> <li>● Upgrade quality of Biology, Chemistry, Physics and Engineering lab experiences with new state-of-the-art equipment and revised lab curriculum to serve students per year. (p.23)</li> </ul>
4. Significantly expand academic and student support services and experiences for Hispanic and low-income STEM students.	<ul style="list-style-type: none"> <li>● Expand/ institutionalize MESA Support Program to serve 200+ students per year. (p.24)</li> <li>● Increase number of Academic Excellence Workshops in Algebra, Calculus, Chemistry and Physics to serve xx students per year. (p.25)</li> <li>● Increase internship experiences for hands-on research. (p.26)</li> </ul>
5. Overcome significant gaps in STEM course and program articulation.	<ul style="list-style-type: none"> <li>● Identify all gaps in STEM major articulations and develop articulation agreements for at least 85% of these gaps. (p.28)</li> <li>● LMC STEM faculty will meet with top feeder university faculty to understand articulation needs to develop and revise new STEM courses and lab experiences as necessary. (p.28)</li> </ul>
6. Create dynamic professional development that promotes a vibrant learning environment that enhances student learning.	<ul style="list-style-type: none"> <li>● Provide professional development opportunities for STEM faculty and staff, including technology in the classroom, and use of new lab equipment. (p.31)</li> <li>● STEM faculty and staff will attend professional conferences and workshops. (p.31)</li> </ul>
7. Enable more data-based decision-making.	<ul style="list-style-type: none"> <li>● Establish a STEM Incubator to research and study innovations to address identified barriers, with an eye toward equity. (p.30)</li> <li>● All grant strategies will collect, analyze and use high-quality/timely data to improve STEM student outcomes relating to enrolment, persistence and STEM completion. (p.31)</li> </ul>