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Project Narrative:

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Budget Narrative
NEED FOR THE PROJECT

This CCRAA proposal is an individual development grant led by Moreno Valley Campus (MVC) of Riverside Community College District (RCCD). Project SUCCESS focuses on one activity: *student learning and success in STEM fields of study*, with two integrated subcomponents: 1) Planning, development, and the establishment of a comprehensive STEM Student Success Center (SSSC) integrating STEM academic and student support services; and 2) increasing STEM articulation agreements among MVC and four-year universities, including STEM faculty and curricula development.

Mission Statement for Project SUCCESS

Project SUCCESS will address the diversity of MVC students, their academic preparation and success in STEM, and their learning through institutional change in STEM academic and student support services.

Moreno Valley Campus (MVC)

MVC, a two-year, public open admissions, federally designated HSI branch campus of RCCD, has a Fall 2007 enrollment was 9,130 students. Students seek diverse educational outcomes, ranging from personal development, career advancement, and degree/certificate completion to transfer to four-year universities. Student demographics reflect wide diversity: 39.8% Hispanic, 14.2% African American, 14.9% Other, and 31.0% White with 52.9% being female and 46.6% being male.

Magnitude of Need for Services: Faced with STEM persistence and success trends that indicate Hispanic and other low-income students are not receiving the academic and student support services needed, it is imperative that the institution establish and maintain high quality and effective STEM academic and student support services. Statistics on the state of education
in the United States indicate a decreasing trend in domestic students choosing to major in and successfully complete degrees in Science, Technology, Engineering, and Mathematics (STEM) disciplines (National Science Board, 2004). Data published in the Chronicle of Higher Education (Farrel, 2001) and elsewhere (Gandara, 2001; Maton, Hrabowski & Schmitt, 2000; Trower & Chait, 2002) accentuate the disproportionate number of underrepresented minorities and women in STEM fields. MVC must meet the needs of its students by increasing the number of Hispanic and other low-income STEM graduate and transfer students. National statistics reflect low graduation rates at the bachelor’s degree levels for women and minorities. Well-documented trends have been reported nationally of declining interests, poor preparedness, a lack of diverse representation, and low persistence of U.S. students in STEM fields of study.

Indicators of Student Need: Many students enrolling at MVC are low-income, first generation college students—under prepared, and/or second language learners. Many first-time students assess into the lowest levels of developmental courses for Math. In Fall, 2007 67.7% of first-time students assessed and placed into basic arithmetic. First-generation and low income students matriculate into MVC with deficiencies in Math that contribute to these students’ future success in STEM fields. The level of preparation varies among these students, but there is a strong need to provide many Hispanic and other low income students with academic and support services in basic skills and prerequisite courses prior to entering STEM courses.

More than 67% of entering students at MVC need remediation in math, a basic requirement for graduation and transfer. Mathematics, especially a fundamental understanding of algebraic concepts, is a key gatekeeper to equitable student success in general and in STEM fields of study. Mathematics is a primary ingredient for life long learning and the progress of our society.
Identification of Needs for Disadvantaged Students: Basic skills student success rates at MVC are significantly lower than retention rates and persistence rates. Persistence rates among minority students are consistently well below 65% and need improvement. Success rates in basic skills courses have been consistently low for targeted students over the past three years. Close to half of the Hispanic students who take basic skills courses do not succeed and the success rate among African Americans is even lower.

### Basic Skills Success Rates (Percentages)

<table>
<thead>
<tr>
<th>Year</th>
<th>Hispanic</th>
<th>Black</th>
<th>Native American</th>
<th>Hispanic, Black, Native American</th>
<th>All Basic Skills Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 04- Sp 05</td>
<td>58%</td>
<td>50%</td>
<td>72%</td>
<td>56%</td>
<td>60%</td>
</tr>
<tr>
<td>Fall 05-Sp 06</td>
<td>61%</td>
<td>49%</td>
<td>54%</td>
<td>58%</td>
<td>60%</td>
</tr>
<tr>
<td>Fall 06-Sp 07</td>
<td>62%</td>
<td>51%</td>
<td>67%</td>
<td>59%</td>
<td>61%</td>
</tr>
</tbody>
</table>

Statewide data suggest that most of the incoming California Community College students are not ready for college-level work, and completion rates for under prepared students are generally low (Legislative Analysts Report: Back to Basics: Improving College Readiness of Community College Students). MVC’s data reflects National trends with low remedial success rates among Hispanic and other low-income students with 50% successful completion rate in remedial math courses; approximately 50% of basic skills students at MVC do not persist in college from term-to-term or Fall to Fall; and 50% do not advance or complete a higher-level
course in the same discipline within three years. (Ibid). STEM degree production and student preparation are linked. MVC seeks to expand the pool of better prepared students by providing STEM academic and students support services for students pursuing degrees in STEM fields of study.

**STEM Retention and Success:** STEM disciplines are now looking at student enrollment, retention, and success data to improve student learning in STEM programs and courses. STEM faculty are moving towards addressing basic skills in and out of the sciences, technology, engineering, and mathematics classrooms in support of increasing the number of targeted students entering STEM fields of study, successfully graduating and/or transferring in STEM fields and /or entering into STEM careers.

**STEM Successful Completion Rates**

<table>
<thead>
<tr>
<th>Program</th>
<th>Ethnicity</th>
<th>Fall 07</th>
<th>Sp 07</th>
<th>Fall 06</th>
<th>Sp 06</th>
<th>Fall 05</th>
<th>Sp 05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>African American</td>
<td>64.08%</td>
<td>70.65%</td>
<td>68.75%</td>
<td>60.26%</td>
<td>69.07%</td>
<td>61.05%</td>
</tr>
<tr>
<td>Health</td>
<td>Hispanic</td>
<td>75.37%</td>
<td>76.99%</td>
<td>78.21%</td>
<td>72.31%</td>
<td>74.21%</td>
<td>78.77%</td>
</tr>
<tr>
<td>Health</td>
<td>White</td>
<td>88.38%</td>
<td>85.68%</td>
<td>83.75%</td>
<td>87.40%</td>
<td>88.87%</td>
<td>91.47%</td>
</tr>
<tr>
<td>Math</td>
<td>African American</td>
<td>37.40%</td>
<td>38.33%</td>
<td>45.06%</td>
<td>36.08%</td>
<td>37.30%</td>
<td>36.06%</td>
</tr>
<tr>
<td>Math</td>
<td>Hispanic</td>
<td>54.06%</td>
<td>52.44%</td>
<td>54.75%</td>
<td>49.01%</td>
<td>51.65%</td>
<td>48.36%</td>
</tr>
<tr>
<td>Math</td>
<td>White</td>
<td>56.69%</td>
<td>58.29%</td>
<td>60.09%</td>
<td>58.93%</td>
<td>58.66%</td>
<td>61.12%</td>
</tr>
<tr>
<td>Science</td>
<td>African American</td>
<td>61.98%</td>
<td>56.25%</td>
<td>64.08%</td>
<td>50.47%</td>
<td>56.15%</td>
<td>48.39%</td>
</tr>
<tr>
<td>Science</td>
<td>Hispanic</td>
<td>63.67%</td>
<td>67.80%</td>
<td>68.10%</td>
<td>56.37%</td>
<td>63.49%</td>
<td>59.82%</td>
</tr>
<tr>
<td>Science</td>
<td>White</td>
<td>68.88%</td>
<td>74.77%</td>
<td>83.90%</td>
<td>71.23%</td>
<td>74.48%</td>
<td>74.03%</td>
</tr>
<tr>
<td>Technology</td>
<td>African American</td>
<td>45.10%</td>
<td>45.96%</td>
<td>43.62%</td>
<td>47.57%</td>
<td>46.24%</td>
<td>42.02%</td>
</tr>
<tr>
<td>Technology</td>
<td>Hispanic</td>
<td>64.67%</td>
<td>57.34%</td>
<td>58.50%</td>
<td>58.06%</td>
<td>52.54%</td>
<td>55.25%</td>
</tr>
<tr>
<td>Technology</td>
<td>White</td>
<td>65.44%</td>
<td>61.83%</td>
<td>58.91%</td>
<td>65.24%</td>
<td>59.18%</td>
<td>51.23%</td>
</tr>
</tbody>
</table>
MVC STEM successful completion data in Science, Technology, and Math reveals the disparity of minority and underrepresented students. In Fall 2007, the success rate for African American students in Mathematics was 37.4% while Technology success rate was only 45.1%. Hispanic students are better overall in Mathematics; however, the rates of success are consistently lower than non-minority students in the high 40 and low 50 percentile ranges. All students show low completion numbers in Mathematics that is consistent with the California High School Exit Exam data among the feeder schools in this area. The majority of the STEM successful completion data shows a higher rate of completion for non-minority students. Hispanic and other low income students show disadvantage in the past three years.

Health Science programs skew the data positively in Health subject areas because of their high program requirements, professionalism, small class sizes (average of 20 students), and nearly perfect passage rates. However, even in Health Sciences, Hispanic and other low income students are 13% or more below non-minority students.

**Gaps/Weaknesses in Services, Infrastructure Addressed by Project:** The data points to gaps in the services hindering MVC STEM students. The following identifies specific gaps that are being addressed by Project SUCCESS:  
1. A Supplemental Instruction (SI) program specifically designed for STEM students at MVC will provide students with additional instruction, one-on-one or small group, in STEM fields of study with a goal to increase student success.  
2. MVC does not currently have dedicated STEM counselors. Counseling expertise in STEM will provide students the best possible and most updated STEM course information, STEM Student Ed Plans (SEPs), and STEM graduation and transfer requirements.  
3. MVC’s Career and Transfer Center does not specialize in STEM. The addition of STEM Career and Transfer services will allow MVC to address the population of students, engage students in STEM fields of study, and
explore STEM careers and Universities. 4. Limited STEM resources are accessible and available to students. MVC has a small Math lab to assist all Math students. The persistence, graduation and transfer, and success rates of Hispanic and other low-income students reflect the lack or resources available. In particular, MVC lacks STEM resources including a designated STEM technology center with hands-on software. An open access STEM lab with STEM resources will provide interactive STEM learning software, access to STEM faculty, access to STEM resources to research STEM fields, careers, universities and training programs. 5. There are very few STEM articulation agreements. Increasing STEM articulation efforts will increase MVC’s partnerships with local school districts and 4-year universities. Increased partnerships will lead to increased shared STEM facilities and labs, curricula development, faculty exchange opportunities, and STEM transfer rates.

It is imperative that MVC respond proactively to the needs for education in STEM fields of study. MVC will address numerous systemic and programmatic challenges that are fundamental to the education of Hispanic and other low income students. MVC asserts that its primary focus is to retain and empower Hispanic and other low income students in STEM fields, increasing persistence, success, and graduation and transfer rates.

PROJECT DESIGN

Design Addresses Needs of Target Population: Project SUCCESS addresses both the academic and student support services aspects of STEM programs and courses under one activity: improved student learning and student success in STEM fields of study. As Spann and Calderwood (1998) point out, colleges best address the diverse needs of their students by an approach that integrates academics and student support services. This proposal has one activity with two subcomponents presenting an integrated and comprehensive STEM plan to increase
STEM persistence, success, and graduation and transfer rates of Hispanic and other low income students.

**Component A** – the STEM Student Success Center (SSSC) will be established as an integrated STEM academic and student support services facility supporting Hispanic and other low income students. The SSSC is designed to provide STEM services including an open access STEM technology center, STEM career and transfer services, STEM counseling services, a STEM resource library, a STEM student engagement center, and STEM tutorial and Supplemental Instruction (SI) programs. The SSSC will make science, technology, engineering, and mathematics (STEM) relevant to students, bringing real-world issues with local significance into on-campus learning while instituting a commitment to students and to their success in STEM programs. The SSSC will offer STEM programs to facilitate student transition from high school to community college or community college to the 4-year university, as well as, to STEM based professional Health Science programs at MVC.

Data regarding pathways to STEM careers indicates that a critical transition point exists in the first and second years of college (National Science Board, 2004). During this time a high percentage of students leave their intended STEM majors. Trends indicate that the percentage of students leaving these majors is higher for under-represented minority students (Seymour, E.; Hewitt, N., 2000). The emphasis of this component is to provide a centralized “success center” in that students access STEM academic and support services from entry to transfer, retaining Hispanic and other low income students.

Establishing a SSSC allows MVC to develop a more effective STEM support mechanism while improving STEM student persistence, success, and graduation and transfer rates. Students in need will be identified by an early alert system so that appropriate STEM services may be
provided proactively rather than allowing students to find themselves on probation before knowing they need assistance. Many researchers (Pascarella, E. and Terrenzini, 1991; Barr, R. and Tagg, J., 1993; Tinto, V., 1998) have repeatedly found that high risk students need support, frequently structured support, beyond the classroom to succeed.

Many targeted students have little understanding of what is expected by a college and very little knowledge of the process and nuances of what it takes to be successful. The STEM Engagement Center as part of the SSSC will provide a relaxed and informal environment that will maximize student and faculty interactions through various well planned activities. Engaging students, providing a welcoming environment for individual learners and for collaborative groups of learners, the Engagement Center will provide the opportunity to foster STEM diversity through attention to cultural backgrounds of students.

Research has indicated that students are more likely to perform better academically when they have a clear understanding of their educational and career goals. Research further shows one of the reasons students leave STEM majors is due to selecting a STEM major with insufficient information about the career (Seymour, E; Hewitt, N., 2000). The SSSC will host a variety of STEM career and transfer services and field experiences to address these issues.

**Component B** – the development and establishment of STEM articulation agreements with four-year universities supporting and providing a STEM pipeline for transfer to increase the number of Hispanic and other low income students entering into STEM fields of study. STEM articulation agreements will open doors for joint teaching both through faculty exchange as well as through technology assisted simultaneous teaching at participating institutions. It will also allow the establishment of joint use specialized facilities for the students.

As the demographics of student populations are vastly changing, faculty are finding,
especially in community colleges, that their classrooms are increasingly made up of ethnically, culturally and linguistically diverse students (Solis, 1995; Burley, Butner & Cejada, 2001; Roach, 2001). Research on students’ needs is recommending that educators should be clearly moving away from the “traditional “one-size-fits-all pedagogy” (Jacobsen, 2000; Cummins, 2000). STEM faculty are prime facilitators of student learning. Research demonstrates that a more student-centered, active learning approach to teaching achieves superior skill development and better understanding of more complex levels of learning (Pascarella, E. and Terrenzini, 1991; Barr, R. and Tagg, J., 1993; Tinto, V., 1998). STEM articulation efforts will include the integration of STEM faculty and curricula development programs. This component will encourage STEM faculty and staff to develop enhanced expertise and better utilize STEM resources and technical assistance appropriate to develop successful STEM articulation agreements and transfer pathways.

In direct response to the need of immediate, strong and broad actions, MVC proposes Project SUCCESS to develop an institutionalized STEM academic and students support services program improving student learning and student success in STEM fields of study through meeting the outlined overall goals and measurable objectives and outcomes.

**Goals, Objectives and Outcomes Are Specified and Measurable**

**CCRAA HSI Project SUCCESS Goals:**  **Goal 1:** Increase student persistence and graduation rates of targeted students in STEM fields of study.  **Goal 2:** Increase the transfer rate of targeted students in STEM fields of study.  **Goal 3:** Improve and increase STEM articulation agreements among institution and four-year universities.  **Goal 4:** Increase student learning and success through revised and integrated academic and student support services.  **Goal 5:** Increase the number of targeted students who pursue careers in STEM fields.
Measurable Objectives and Outcomes:

1. To significantly improve the integration of academic and student support services to improve student learning and success.

Performance Outcomes: the following outcomes will be completed by 9/10.

1.1 A SSSC comprehensive STEM academic and student support services improving persistence, success, graduation, and transfer rates among Hispanic and other low income students; 1.2 Use of academic and student support services will increase by 30%; 1.3 A revised STEM tutorial training program will be created that will increase the number of STEM tutors by 50%; 1.4 A STEM Supplemental (SI) Instruction program will be created that will focus on integrating key developmental and gateway courses with STEM programs and courses; 1.5 STEM tutoring will be available on -line to more than 80% of STEM students.

2. To increase graduation and transfer rates in targeted population.

Performance Outcomes: the following outcomes will be completed by 9/10.

2.1 A SSSC comprehensive STEM academic and student support services improving persistence, success, graduation, and transfer rates among Hispanic and other low income students; 2.2 The number of STEM students who achieve a certificate, degree or transfer will increase by 10%; 2.3 The percent of low income and Hispanic students who graduate or transfer in the STEM fields of study will equal or surpass the rest of the population; 2.4 Increase the number of Hispanic and other low income students transferring in STEM fields of study to 4-year universities by 5%.

3. To increase the first year to second year persistence rate in targeted population by 10%.

Performance Outcomes: the following outcomes will be completed by 9/10.

3.1 A SSSC comprehensive STEM academic and student support services improving persistence, success, graduation, and transfer rates among Hispanic and other low income students; 3.2
Persistence rates will increase by 10%; 3.3 The STEM persistence rate of low income and Hispanic students will equal or surpass the rest of the student population; 3.4 The mean GPA of low income and Hispanic students in STEM fields of study will equal or surpass the rest of the student population; 3.5 The number of Hispanics and other low income minorities who successfully complete STEM required prerequisites will increase by 5%.

4. To increase the number of articulation agreements with four-year institutions in STEM fields of study by 30%.

Performance Outcomes: the following outcomes will be completed by 9/10.

4.1 The number of STEM articulation agreements with four-year universities will increase by 30%; 4.2 Two-year and four-year institution STEM faculty and administrators will have created a pathway to transfer in STEM fields of study; 4.3 A SSSC comprehensive STEM academic and student support services improving persistence, success, graduation, and transfer rates among Hispanic and other low income students.

5. To review, revise and, where necessary, redesign STEM courses and programs to better address the needs of targeted populations.

Performance Outcomes: the following outcomes will be completed by 9/10.

5.1 A SSSC comprehensive STEM academic and student support services improving persistence, success, graduation, and transfer rates among Hispanic and other low income students; 5.2 A plan for revising STEM programs will be written and approved by STEM faculty, Academic Senate, Curriculum Committee, and the Board of Trustees; 5.3 A STEM faculty handbook will be completed defining mission, course outcomes, entry and exit criteria, and instructional strategies for all STEM courses; 5.4 Course syllabi for all STEM courses will be reviewed and revised to include close articulation with four-year institution course expectations; 5.5 MVC will
have implemented revised and new STEM courses; 5.6 Retention rates in STEM courses will increase by 10%; 5.7 STEM success rates in STEM courses will increase by 5%; 5.8 The number of students using academic and student support services will increase by 30%.

6. To significantly strengthen the academic culture by increasing faculty understanding of learner-centered instructional practices, learning communities and other innovations that lead to increased student learning and success.

Performance Outcomes:

6.1 65% of STEM faculty will have participated in CCRAA faculty development activities.

6.2 65% of STEM faculty will increase their knowledge in a) learning theory and design; b) effective learner-centered instructional strategies that support inclusive learning communities and mastery of core competencies, c) best practices in assessment for measuring student learning, d) use of action research to evaluate effectiveness of instructional strategies.

6.3 20% of STEM faculty will have participated in a faculty exchange and joint teaching project focused on the Health Sciences.

**PROJECT SERVICES**

Students cannot achieve high levels of performance without access to academic and student support services, skilled professional faculty, adequate classroom time, and a variety of resources facilitating success.

To assist Hispanic and other low income students to move successfully from STEM prerequisites courses into STEM transfer programs and courses, MVC proposes to develop the STEM Student Success Center (SSSC) focusing on the integration of STEM academic and student support services while developing STEM articulation agreements among MVC and four-year universities including STEM faculty and curricula development components.
The SSSC will provide open access to targeted students addressing the diversity of our students, academic preparation, learning styles, and overall educational needs. STEM academic and student support services will provide students the opportunity to successfully overcome deficiencies and move successfully into STEM transfer programs and courses with an increase in STEM persistence, success, and graduation and transfer rates among targeted students. The SSSC will provide the following STEM comprehensive services:

A STEM open access technology center will be available to students equipped with state-of-the-art STEM technology and multimedia materials. The STEM technology center within the SSSC will provide up-to-date technology and hands-on experiences for STEM students. SSSC will be equipped so that Universities will offer video-streamed STEM courses to MVC students.

STEM case management counseling services provide Hispanic and other low income students with a focus on early intervention, resources, continued monitoring and contact. STEM counselors will meet with targeted students a minimum of twice a semester providing: resources and referrals for STEM tutoring; Supplemental Instruction, mentoring, study groups, transfer information, assistance with admissions and records procedures and policies, financial aid information, registration information; and will design Student Ed Plans (SEPs). STEM counselors will provide STEM college success courses focusing on persisting through prerequisite courses to transfer, college experience, test taking skills, financial aid, study skills, and time management.

STEM Summer Bridge projects will focus on outreach to Hispanic and other low income students entering MVC or continuing with a goal of transfer and on providing experiential learning experiences to students transitioning from high school to community college and community college to 4-year universities. Twenty (20) STEM students will work in small groups
for comprehensive assessment; understanding transfer and what the college and/or four-year university has to offer, including STEM academic and student support services; and bonding with fellow students and STEM faculty and counselors. STEM mentors will be assigned to each incoming student and work with students for at least two semesters.

The UCR Medical Scholars Program, established in 2004 by UCR’s Division of Biomedical Sciences, will offer a significant Summer Bridge project to increase the diversity of undergraduate students who succeed in their degree areas and achieve their goal of entering medical school or an allied health discipline. The Medical Scholars program targets motivated pre-health Hispanic and other low-income students and helps them to become highly competitive candidates for graduate and professional schools.

The Summer Bridge pilot is a 5-day; residential summer intensive transfer experience for community college students jointly sponsored by UCR and MVC during the summer designed for thirty (30) Hispanic and other low income students to heighten the awareness of the various pathways to Health Science professions. Day and evening activities include STEM speakers, career exploration and advising, summer research opportunities, team building activities and projects, leadership development, hands-on project-based learning, campus life, and STEM student and faculty panels.

STEM Engagement Center - SSSC will provide targeted students a hospitable and welcoming environment focused on STEM. STEM resources and materials will be readily available at all times. The Engagement Center as a part of the SSSC will build a culture of STEM service, mentoring, support, and a sense of belonging addressing student and faculty interactions. Mentoring will be available from STEM faculty, STEM professionals, and STEM graduate students. Through continuous assessment and evaluation, STEM Educational
Advisors and Faculty Coordinator will identify SSSC problems and concerns allowing for round table discussion on improvement strategies with students, faculty, and staff.

STEM tutorial services will be accessible and available to all targeted students through the SSSC by appointment and while STEM tutors will be available on a walk-in basis. STEM faculty will work in developing a STEM tutor training program to meet the needs of the students.

STEM Supplemental Instruction (SI) opportunities will be available through the SSSC. STEM faculty and learning lab faculty will develop STEM SI curriculum and implement based on the students’ needs. SI programs will deliver highly structured and focused tutorial support to students. STEM faculty will lead SI sessions or provide quality STEM SI training for SI leaders.

STEM Career and Transfer services will be available and accessible to all students through the SSSC. Students will be exposed to different careers by experts from both industry and academia who will be invited to give series of lectures coordinated by the STEM Educational Advisors. Furthermore, STEM students will also be engaged in organized site visits to various academic, research and industrial institutions. One hundred students in the first year and 200 in the second year will participate in the STEM transfer field trips. A lecture series will be developed to present careers and opportunities to earn advanced degrees.

Coordination with MVC learning labs will support STEM students moving through STEM prerequisite courses to transfer level STEM programs and courses. Learning labs are accessible to targeted students with specific centers in English, Math, Reading, and ESL/Language labs. A biotechnology laboratory at MVC will be developed and equipped and made operational with this project.

Evaluation for continuous improvement of project: An Outcomes Assessment Specialist will develop systems for the collection of necessary program data, to collect and analyze data and
work with the external evaluator to provide feedback relating to formative evaluation and program improvement.

To assist in developing transfer readiness, STEM articulation agreements with four-year universities including STEM faculty and curricula development will be implemented. This component will include MVC and four-year university STEM faculty and administrators forming a STEM Advisory Council promoting the success and transfer in STEM fields of study for Hispanic and other low income students. Faculty Exchange with four-year university STEM faculty will provide MVC instructors opportunity to incorporate innovation into curriculum content and pedagogical delivery. A STEM Faculty Coordinator will develop and coordinate joint teaching activities, visiting lecturers, and articulation efforts.

Current educational research has shown directing instruction at ongoing change and learning that starts with a focus on the individual first and then moves to the group and organization to be the most effective forms of professional development (Fullan, 1997; Loucks-Hopersly, 1995). STEM faculty will research: course-level learning; student learning; how to address the learning needs of a diverse student population; assessment and outcomes; and up-to-date curricula in their field of expertise. STEM faculty will focus on moving from an instructional paradigm to a learning paradigm (Barr and Tagg, 1995) supporting the success of Hispanic and other low income students.

**PROJECT PERSONNEL**

Project SUCCESS requires administrators and personnel who are qualified and experienced in STEM with program administration and implementation to work with students throughout the educational pipeline, building STEM baccalaureate transfer pathways.

**Project Encourages Applicants from Underrepresented Minorities:** Project SUCCESS
encourages applications for employment from qualified underrepresented minorities. RCCD Moreno Valley Campus is an equal opportunity employment institution, and it will encourage underrepresented minorities to apply. The institution will run advertisements in publications with high Hispanic readership in the greater Los Angeles, Orange County, and the Inland southern California Region. Efforts will be made by the institution to run advertisements in publications that reach all minority potential applicants. The Moreno Valley Campus has a substantial Hispanic student enrollment that represents the community demographics.

Project SUCCESS is closely tied to Moreno Valley Campus’ strategic objectives and Master Plan integrating academic and student support services to increase student persistence, success, and transfer rates. The STEM Student Success Center (SSSC) will increase student learning and student success. Senior level administrators with direct administrative authority of all STEM areas are committed to the project. Key campus administrative personnel will participate in executing the goals, objectives and activities of this CCRAA project:

President: The Project will ultimately report to distinguished educator Monte Perez, Ph.D., who was recently selected as President of the Moreno Valley Campus. Dr. Perez was formerly a policy fellow for the U.S. Department of Education, serving as the Secretary’s senior policy analyst specializing in financial aid, workforce education, TRiO, and youth employment issues.

Vice President of Educational Services (5% in-kind funding): Dr. Lisa Conyers reports to President Perez and is the senior administrator over academic affairs and student services. Dr. Conyers over many years has had a leading role in the development of both the academic as well as the professional programs at the Moreno Valley Campus.

Dean of Allied Health Programs (10% in-kind funding): Dr. Wolde-Ab Isaac is a medical scientist who has a Ph.D. in Medicinal Chemistry with many years of experience in Clinical
Pharmacology. Dr. Isaac reports to the Vice President of Educational Services and is the administrative authority for all Health Care programs at the Moreno Valley Campus.

**Qualifications of the Project Director: Project Director (100% funded):** Under the direction of the President, the Project Director coordinates and provides leadership for the successful implementation of the CCRAA HSI Project SUCCESS grant; acts as a liaison to the targeted universities and high schools; and enhances service to the project and its participants. The Project Director provides oversight of the entire CCRAA HSI project working closely and collaboratively with STEM faculty and staff on campus. The Project Director will represent and communicate the project’s message and successes to the community it serves and maintain an understanding of current STEM ideas, trends and practices, pertaining to the areas of responsibility for this position.

The Project Director will have a Master’s degree in one of the STEM disciplines or a related field and two years minimum of Grant administration or administrative experience at the community college level is required. Two years of STEM teaching experience at the community college level is preferred. Must be familiar with staff and organizational development models, STEM instructional technology, and academic and student support services.

**Qualifications of Key Project Personnel: STEM Counselor (100% funded):** Counsel and advise STEM students with respect to a case management approach. Aid in the integration of counseling and teaching with STEM courses. May teach specialized STEM guidance and learning strategy courses designed to meet the needs of Hispanic and other low income students. Assist in developing academic early warning and referral for STEM learning assistance intervention. Work to expand STEM student success, implement STEM Summer Bridge and college success courses and workshops. Assist in strengthening STEM articulation and transfer
pathways with universities and STEM outreach to high schools. Provide STEM career and academic counseling.

The STEM counselor will have a Master’s degree in counseling, rehabilitation counseling, clinical psychology, counseling psychology, guidance counseling, educational counseling, social work, or career development; or the equivalent and a minimum of two years of counseling/instruction experience at the community college level. Advanced training and experience in STEM programs including learning strategies and transfer is preferred. Knowledge in current research and strategies that address student learning and success is required. Experience within a multicultural work environment is desirable.

**STEM Educational Advisors (2) (100% funded):** Develop and implement STEM career and transfer component. May include evening assignments, STEM outreach to high school and community college students. Assist in developing STEM resource library, STEM engagement center, and STEM learning assistance projects. Work to expand STEM transfer activities, workshops, and seminars. Develop STEM Summer Bridge component. Coordinate STEM career and transfer activities. The Educational Advisors will have a Bachelor’s degree in Science in one of the STEM disciplines or related areas is highly desirable and at least a year’s experience working with Hispanic and other low income student populations within a community college environment. Advanced training and understanding of STEM career and transfer programs. Knowledge in current STEM outreach and resource strategies that address STEM student learning and access. Knowledge of current STEM transfers and career programs, methodologies and activities.

**STEM Faculty Coordinator (100% funded):** Serve as lead faculty members in organizing STEM Supplemental Instruction, tutorial services, and faculty development and
training. Review and revise where needed, STEM programs and courses. Facilitate STEM articulation agreements with four-year universities. Serve as liaison between MVC STEM faculty and university faculty including transfer pathways and STEM Summer Bridge programs. The Faculty Coordinator will have a Master’s degree in any of the STEM disciplines and a minimum of five years community college teaching. Experience working with Hispanic and other low income students preferred.

**External Evaluator:** Laurie Jan Riggs, Ph.D., earned her Ph.D. at the University of California, Riverside, in Curriculum and Instruction, Mathematics Education and Research Methods. She earned her M.A. and B.A. degrees in Mathematics from California State University, San Bernardino. She is an Associate Professor at California State Polytechnic University, Pomona, teaching math courses, is a professional development provider, and a committee chair. Dr. Riggs’ previous academic experiences include being an External Evaluator for the Chino Unified School District, Silver Valley Unified School District, and the San Bernardino County Office of Education. She was formerly a Research Fellow in the California Educational Research Cooperative at the University of California, Riverside. Dr. Riggs has worked extensively on Beginning Teacher Support and Assessment projects. Dr. Riggs is Principal Investigator in the CA-MSP grant at the Pasadena Unified School District. She publishes and makes professional presentations widely. In 2007, Dr. Riggs’ most recent journal article with co-authors was published in the New England Mathematics Journal.

**Outcomes Assessment Specialist (50% funded):** Reporting to the Project Director, the Outcomes Assessment Specialist develops systems for the collection of necessary program data, collect and analyze data and work with the external evaluator to provide feedback relating to formative evaluation and continuous program improvement. The OAS will have a Master’s
Degree preferably in a STEM-related field and a minimum of two years directly related experience in outcomes assessment or applied educational research are required. Two years of experience in instructional design or teaching is preferred.

**ADEQUACY OF RESOURCES**

**Budget is Adequate to Support Project:** Project SUCCESS’ budget provides the resources to execute the goals, objectives and outcomes. The budget details each major line item with reasonable costs for operation of an activity of this size and in this region of the country, in particular, Southern California.

Key personnel budgeted for Project SUCCESS include a 100% Project Director, STEM Counselor at 100%, two 100% STEM Educational Advisors, 100% STEM Faculty Coordinator, 50% Outcomes Assessment Specialist. Each position is appropriately and necessarily budgeted under RCCD salary and benefits based on education and experience. A full-time, 100% budgeted Secretary will provide administrative support to key personnel.

**Costs are reasonable to Objectives, Design and Potential Significance of Project:** Project SUCCESS’ budget was carefully constructed with federal regulations to adequately support the activities, make effective use of federal and local resources, and allow Project SUCCESS to successfully obtain the goals and purpose of the project. It is estimated Project SUCCESS will need STEM supplies, equipment, travel, and other resources: 1) instructional multimedia materials; 2) student educational resources; 3) consumables; 4) specialized computers and software; 5) Video-streaming equipment; 5) SSSC resource materials; 6) Biotechnology lab equipment; 7) faculty development, workshop, and conference support. Supplies will assist in record maintenance, evaluation or Project SUCCESS, monitoring of STEM student services.

**Campus Facilities Increase Project Capacity:** MVC learning labs will provide
assistance to STEM students in the project: 1. Math Lab: Resources available to students include specialized software, hybrid math courses, instructor assistance, and math textbooks and resources, and tutorial services. A 30 unit Math Mobile Lab available, used for math module courses, and housed in a math dedicated classroom; 2. Computer Lab: An open computer laboratory with basic computer programs, tutorials, and assistance and CIS instructors is available to the students in this STEM program; 3. Writing & Reading Center (includes ESL): an open access English, Reading, and ESL learning center provide core academic services. A Reading Mobile Lab with a 30-unit wireless lab cart is available and housed in a Reading designated classroom; 4. Language Laboratory: A 30-unit lab cart is housed in a dedicated language classroom.

MVC’s senior administrators are supporting Project Success at the following in-kind percentages: President at 5%, Vice President of Educational Services at 5% and Dean of Health Sciences at 10%. The total budget is developed to provide Project SUCCESS the opportunity to enhance the delivery of service.

MANAGEMENT PLAN

Adequacy to Achieve Project Objectives on time and within budget: The Management Plan will ensure sufficient budget, time lines and budget resources are allocated to achieve outcomes for the Activity of the project, improving student learning and student success in STEM fields of study.

The project’s five STEM project goals are addressed by the Management Plan to be accomplished on time and within budget: 1) Improve learning and increase student persistence and graduation rates of targeted students in STEM fields of study; 2) Increase the transfer rate of targeted students in STEM fields of study; 3) Increase and improve STEM articulation.
agreements among institution and four-year universities; Increase student learning and success through revised and integrated academic and student support services; and 5) Increase the number of targeted students who pursue careers in STEM fields.

The President of MVC is the ultimate authority and responsible for Project SUCCESS with all aspects of institutional operation according to the policies of the institution. Assisting in administration and management is the Vice President of Educational Services will support the objectives by assisting with developing the SSSC, including the physical space and facilitation with faculty and staff; The Vice President will participate in establishing and implementing the STEM Advisory Council.
The Dean of Health Sciences at a 10% in-kind commitment to Project SUCCESS assisting in development of the STEM Advisory Council, STEM Summer Bridge program, SSSC, STEM programs and courses including curriculum development, STEM articulation, and transfer efforts in the Health Sciences.

The institution will appoint a full-time Project Director (100% CCRAA funded) with a successful history of grant and project administration with experience and knowledge of STEM practices. The Project Director will report directly to the MVC President. Qualifications include a Master’s degree, preferably in a STEM field, and five years of successful project administrative experience. STEM Teaching experience is preferred.

The Project Director will have access and support of the highest levels of administration and faculty, as well as being integrated into regular planning and decision making processes of the campus. The position will be the primary liaison between the project, President, MVC administration, STEM faculty, STEM Advisory Committee, and other key faculty and administrators. The Project Director is responsible to ensure activity objectives are meeting project milestones, assessment and evaluation benchmarks, and demonstrating outcomes.

**Project Objectives, Milestones, Responsible Persons, and Timelines**

**Objective 1:** To significantly improve the integration of academic and student support services to improve student learning and success.

<table>
<thead>
<tr>
<th>Project Task Milestone</th>
<th>Responsible Persons</th>
<th>Timeline</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEM Student SUCCESS Center</td>
<td>PD, Fac. Coord., Project Staff, VP Business VP Ed Services</td>
<td>By 3/09</td>
<td>$149,342</td>
</tr>
<tr>
<td></td>
<td>PD, Dean Health,</td>
<td>By 7/09</td>
<td>$88,855</td>
</tr>
<tr>
<td>Objective 2: To increase graduation and transfer rates in targeted population.</td>
<td>Project Task Milestone</td>
<td>Responsible Persons</td>
<td>Timeline</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>STEM Summer Bridge offered</td>
<td>Fac.Coor., STEM faculty, Ed Advisor, STEM Counselor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEM Student Outreach</td>
<td>PD, Educ. Advisors, Project Staff, STEM Counselor</td>
<td>By 3/09</td>
<td>$61,387</td>
</tr>
<tr>
<td>STEM Workshops and Seminars</td>
<td>PD, Fac. Coord., Ed Advisors, OAS</td>
<td>By 7/09</td>
<td>$67,766</td>
</tr>
<tr>
<td>Mentoring Programs</td>
<td>PD, Fac. Coord, Ed. Advisor, STEM Counselor</td>
<td>By 7/09</td>
<td>$118,850</td>
</tr>
<tr>
<td>SSSC opened, fully operational with student support services</td>
<td>President, VP, Dean, PD, Project faculty and staff</td>
<td>By 9/09</td>
<td>$50,600</td>
</tr>
<tr>
<td>Tutors hired</td>
<td>PD, Fac. Coord, Tutors, Tutorial Services</td>
<td>By 9/09</td>
<td>$24,340</td>
</tr>
<tr>
<td>Supplemental Instruction</td>
<td>PD, Fac. Coord.</td>
<td>By 9/09</td>
<td>$82,274</td>
</tr>
<tr>
<td>STEM Counseling</td>
<td>PD, STEM Couns., Ed Adv.</td>
<td>By 3/09</td>
<td>$58,388</td>
</tr>
<tr>
<td>Learning Lab agreements</td>
<td>PD, Fac. Coord., Deans, VP Business Services</td>
<td>By 9/09</td>
<td>$24,341</td>
</tr>
<tr>
<td>Project Task Milestone</td>
<td>Responsible Persons</td>
<td>Timeline</td>
<td>Budget</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------------------------------------------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>Revise and review STEM programs and courses</td>
<td>PD, Fac. Coord.</td>
<td>By 9/09</td>
<td>$24,341</td>
</tr>
<tr>
<td>Provide STEM resources, counseling</td>
<td>STEM Counselor, Ed. Adv.</td>
<td>By 3/09</td>
<td>$50,564</td>
</tr>
<tr>
<td>Distance ed courses offered</td>
<td>PD, Fac. Coord.</td>
<td>By 9/09</td>
<td>$24,341</td>
</tr>
<tr>
<td>Acad./Stud. Support. for prerequisites</td>
<td>PD, Fac. Coord., STEM Counselor, Ed Advisor</td>
<td>By 9/09</td>
<td>$68,853</td>
</tr>
<tr>
<td>Expand/develop new STEM Transfer</td>
<td>PD, Fac. Coord.</td>
<td>By 5/10</td>
<td>$34,242</td>
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<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Objective 3:</strong> To increase the first year to second year persistence rate in targeted population by 10%.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Project Task Milestone</strong></td>
<td><strong>Responsible Persons</strong></td>
<td><strong>Timeline</strong></td>
<td><strong>Budget</strong></td>
</tr>
<tr>
<td>SSSC</td>
<td>PD, Fac. Coord., Project Staff, Deans, VPs</td>
<td>By 9/09</td>
<td>$149,342</td>
</tr>
<tr>
<td>STEM Tutorial services revised, expanded</td>
<td>PD, STEM Couns., tutors</td>
<td>By 9/09</td>
<td>$32,107</td>
</tr>
<tr>
<td>STEM Case Management</td>
<td>Fac. Coord., STEM Couns., Ed. Advisor</td>
<td>By 9/09</td>
<td>$61,029</td>
</tr>
<tr>
<td>Cont. Improvement: research data</td>
<td>PD, Fac. Coord., OAS</td>
<td>By 5/10</td>
<td>$116,486</td>
</tr>
<tr>
<td>Additional STEM resources provided</td>
<td>PD, Fac. Coord, STEM Couns., Ed. Advisors</td>
<td>By 5/10</td>
<td>$491,324</td>
</tr>
</tbody>
</table>
Objective 4: To increase the number of articulation agreements with four-year institutions in STEM fields of study by 30%.

<table>
<thead>
<tr>
<th>Project Task Milestone</th>
<th>Responsible Persons</th>
<th>Timeline</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEM Advisory Council implemented</td>
<td>President, VP, Dean, PD, STEM faculty</td>
<td>By 9/09</td>
<td>$26,569</td>
</tr>
<tr>
<td>Transfer articulation/curricula starts; completed STEM articulation agreement</td>
<td>PD, Fac. Coord., Ed. Advisor, STEM Counselor, STEM Faculty, PD</td>
<td>By 9/10</td>
<td>$81,545</td>
</tr>
<tr>
<td>Summer transfer programs in place</td>
<td>PD</td>
<td>By 7/09</td>
<td>$113,877</td>
</tr>
</tbody>
</table>

Objective 5: To review, revise and, where necessary, redesign STEM courses and programs to better address the needs of targeted students.

<table>
<thead>
<tr>
<th>Project Task Milestone</th>
<th>Responsible Persons</th>
<th>Timeline</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEM programs/courses revised</td>
<td>OAS, STEM faculty, Deans, VPs, PD</td>
<td>By 9/09</td>
<td>$43,714</td>
</tr>
<tr>
<td>STEM faculty resource manual completed</td>
<td>PD, STEM faculty and staff, PD, OAS</td>
<td>By 5/10</td>
<td>$43,715</td>
</tr>
</tbody>
</table>

Objective 6: To significantly strengthen the academic culture by increasing faculty understanding of learner-centered instructional practices, learning communities and other innovations that lead to increased student learning and success.
<table>
<thead>
<tr>
<th>Project Task Milestone</th>
<th>Responsible Persons</th>
<th>Timeline</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Lectures in place</td>
<td>Fac. Coord., STEM faculty, Ed Advisors, PD</td>
<td>By 3/09</td>
<td>$93,316</td>
</tr>
<tr>
<td>Faculty Exchange begins</td>
<td>Fac. Coord., PD, Deans, STEM Chairs</td>
<td>By 4/09</td>
<td>$34,342</td>
</tr>
<tr>
<td>Faculty research, cont. improvement</td>
<td>Fac. Coord., STEM Faculty, OAS</td>
<td>By 2/10</td>
<td>$46,356</td>
</tr>
<tr>
<td>Sustained STEM training programs</td>
<td>PD, Deans, VPs, OAS</td>
<td>By 9/10</td>
<td>$31,022</td>
</tr>
</tbody>
</table>

Procedures to execute project responsibilities will include the following: Project SUCCESS staff and faculty meetings will be held on a weekly basis to monitor progress of all activities and services; develop Project SUCCESS Policies and Procedures manual outlining all staff responsibilities, project specific management and procedures; engage in the institution’s planning, staff meetings, Academic Senate, STEM discipline and department meetings, and President’s cabinet meetings on a regular basis; data will be reviewed by the Project Director and team quarterly, or when available, to provide continuous improvement of program services. All partners will participate in the data review and the feedback and continuous improvement.

A STEM Advisory Council will be implemented as a result of working with MVC faculty, staff, administrators, and STEM higher education two-year and four-year personnel. Meeting quarterly, the STEM Advisory Council will consist of senior administrators representing STEM programs from partnering four-year universities; MVC STEM faculty and senior MVC administrators; STEM public agencies; and STEM industry representatives.
The Project Director, working with MVC STEM faculty, staff, administrators, and four-year university partners, will implement all aspects of the project and monitor progress in relation to the required outcomes on an ongoing basis. The results of these reviews will be shared with all participants during regular project meetings, and continuous improvement will be made to the project’s structure, content, and policies and procedures as is deemed necessary for project success.

The project will follow CCRAA regulations, EDGAR, and applicable OMB Circulars. Procedures for accounting project administration follow: monitor and review expenditures by Project Director weekly and reported to Project team at the weekly meetings; prepare documentation for matching and funded positions; review expenditures with the RCCD Accounting Office continually; and prepare annual reports for the U.S. Department of Education.

Relationships with our partners, industry advisors, and business and industry participants will be continuously strengthened through regular meetings and one-on-one contact. The Project Director will work with the RCCD Finance and Administration Office to ensure that all expenditures are in compliance with district fiscal policies and procedures. The project director will monitor project expenditures using Galaxy, the district’s view-only network software that provides real-time display of district financial ledgers. The Project Director will also maintain detailed supporting documentation for project expenditures as is necessary to document their relationship to the objectives of the project. RCCD undergoes an annual audit in compliance with Office of Management and Budget circular A-133 (Single Audit Act).

RCC’s District Accounting Office will provide accounting support during the project. All grants are entered into the county system upon approval from the RCCD Board of Trustees. Expenditures are captured in the system, and two accounting technicians monitor the
requirements of the grants to the budgets appearing in the financial system.

**EVALUATION PLAN**

**Project Evaluator:** Dr. Laurie Riggs, associate professor in the Department of Mathematics and Statistics at California State Polytechnic University, and a team of graduate students will conduct the external evaluation. Dr. Riggs has an extensive background in mathematics education and is an experienced educational researcher. She worked as a research fellow at the California Educational Research Cooperative while completing her Ph.D. at the University of California, Riverside. She has served as an external evaluator for the State of California’s IIUSP program and has conducted external evaluations for NSF and FIPSE funded projects.

**Evaluation Overview:** The evaluation plan will consist of a mixed methods approach for formative and summative assessment based on the five goals and six measurable objectives in this proposal. Assessment will track program implementation (formative evaluation) to facilitate timely feedback to the management team enabling continuing project improvement. Summative evaluation will track attainment of project goals and objectives along with a longitudinal study of the percentage of project students transferring from RCCMVC to four year universities and the percentage of project students receiving STEM related degrees.

The Project evaluation will focus in two primary directions: 1. In relation to objectives 1, 2, and 3 we will evaluate the impact of the support system on the student participants; 2. In relation to objectives 4, 5, and 6 we will evaluate the institutional changes through tracking articulation agreements, course redesign, and cultural changes in instructional practices.

**Objectives One, Two, and Three:** In assessing the impact on student participants we will investigate the usefulness of project support including the tutorial services, supplemen
instruction, learning labs, mentoring, outreach services, workshops, and summer bridge programs. The evaluation will answer these questions through written surveys, and focus group interviews conducted by the external evaluator at both formative and summative stages in the evaluation. The evaluation will implement the Small Group Instructional Diagnoses (SGID) during the semester to provide feedback on student perceptions, allow faculty/staff to make adjustments, and remind students of their learning goals. SGID is considered one of the most effective means of both assessing and improving instruction (Nyquist, 1994). Questions about the success of students in critical gateway courses will be tracked though student academic records. These measures will be used for both formative and summative assessment as outlined in evaluation matrix 1 below.

*Evaluation Matrix 1*

<table>
<thead>
<tr>
<th>Question 1: Did the project positively improve student support services to the targeted population?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub question</strong></td>
</tr>
<tr>
<td>Did more students participate?</td>
</tr>
<tr>
<td>Were the designed STEM tutorial services, workshops</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Question 1: Did support service help students progress through remedial courses?</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Did support service help students progress through remedial courses?</td>
</tr>
<tr>
<td>Observation SGID method</td>
</tr>
<tr>
<td>end of each Semester</td>
</tr>
<tr>
<td>• SGID Mid-Semester</td>
</tr>
<tr>
<td>• Results to be reported to leadership management team</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 2: Did the project improve the graduation and transfer rates for the targeted population?</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many targeted students complete transfer prerequisite requirements for STEM majors?</td>
</tr>
<tr>
<td>Data collected for longitudinal database each term</td>
</tr>
<tr>
<td>End of each semester</td>
</tr>
<tr>
<td>Academic records</td>
</tr>
<tr>
<td>Student survey to track academic plans</td>
</tr>
<tr>
<td>Institutional research and records office</td>
</tr>
<tr>
<td>Participating students</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How many targeted students complete transfer prerequisite requirements for STEM majors?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic records</td>
</tr>
<tr>
<td>Institutional</td>
</tr>
<tr>
<td>Data collected for longitudinal database each term</td>
</tr>
<tr>
<td>End of each semester</td>
</tr>
</tbody>
</table>
Question 3: Did the persistence rate from year one to year two increase for the targeted population?

How many targeted students persisted?

Academic records

research and records office

• Data collected for longitudinal database each term
• Annual report of progress

Did the faculty professional development improve student success?

Academic records

SGID method

Institutional research and records office

Participating students

• Data collected for longitudinal database each term
• SGID Mid-Semeste

Objectives 4 and 5: Evaluation of objectives four (Increasing articulation agreements) and five (Reviewing and revising STEM courses) will be documented by collecting evidence from project directors and RCC administrators. The external evaluator will determine to what extent the objectives have been reached by artifacts produced from said articulation agreements and approved reviewed/revised courses. These artifacts will be used as performance indicators.
Benchmark reports will be produced semi-annually to monitor progress toward meeting all project goals and targets as laid out in the measurable objectives

**Objective 6: Significantly Strengthening the Academic Culture:** The impact of the project on the faculty and particularly learning centered instructional practices is considered a distinct component of the impact on increased learning and success for Hispanic students in STEM courses. We plan to design a short questionnaire focusing on the effect of additional professional development opportunities and support in implementing student centered instructional practices. We will track faculty participation in professional development opportunities and collect feedback from all workshops. An annual survey will be administered by the external evaluator to all participating faculty. Participants will be assured of anonymity to allow for reliable and valid feedback for formative and summative assessment.

**Survival Analysis:** Given the core question of student persistence, transfer, and completion rates a five-year longitudinal study of the student participants will remain in place when the two-year project is completed. The purpose of the longitudinal study is to follow student from initial experience at the community college through persistence in a four year degree in a STEM field. The evaluator will make use of a longitudinal database for tracking the students, and a survival analysis statistical method will analyze rates of student persistence/attrition among project participants. Survival analysis is a powerful statistical tool for tracking time dependent variables. The analysis will be used to determine hazard functions and evaluate the relationship of explanatory variables to survival time. Students entering the program will be required to agree to participate in the longitudinal study, and to provide identifying information. The same expectations will be made of a community college control group with similar academic and demographic characteristics.
Moreno Valley Campus College Cost Reduction and Access Act Program

Budget Justification Narrative for U.S. Department of Education Funds

October 1, 2008 – September 30, 2009

Personnel $453,701

Upon notice of award, a Project Director @ 100% will be hired and will have responsibility for the overall management of the program and staff to ensure that all goals and objectives are met. Budgeted costs for this position are based upon a beginning salary range of 13.0 of the management salary schedule ($74,194) for October 2008 through June 2009 with a 1% step (longevity) and a 3% anticipated cost-of-living (COLA) increase in July of 2009 (effective for July, August and September of year one of the grant) for a total of $74,942. The college’s fiscal year runs from July to June, thus, salaries increase due to longevity and cost-of-living increases each July. Please note: Professional salaries in the state of California are necessarily higher than in other parts of the nation due to an extremely high cost of living; a salary at this level will allow the Moreno Valley Campus to hire a highly qualified individual with the STEM expertise necessary to ensure program success.

A 100% Science, Technology, Engineering and Math (STEM) Counselor will be hired to: provide career guidance to students and refer them to critically needed resources, both within the college and in the outside community; follow-up with students identified by the Early Alert system as being at-risk; track and monitor students’ progress in all aspects of their program participation; organize and oversee engagement activities; develop and deliver special STEM guidance courses; assist with the STEM transfer field trips; refer students for tutoring and the mentoring program; and assist with the summer bridge academy/program. Salary for year one of
the grant, $64,643, is based upon range C step 3 of the counselor salary schedule ($63,512) October 2008 through June 2009 with a 4% step and an anticipated 3% COLA in July of 2009.

The program will also employ an Outcomes Assessment Specialist @ 50% to: develop systems for the collection of necessary program data, collect and analyze data and work with the external evaluator to provide feedback relating to formative evaluation and continuous program improvement. Salary for year one of the grant, $35,654, is based upon 50% of range 12.5 on the management salary schedule ($70,596) October 2008 through June 2009 with a 1% step and an anticipated 3% COLA in July of 2009.

Two (2) Educational Advisors, each @ 100% will be hired to: organize mentorship activities, operate the STEM Career and Transfer Center, maintain the STEM Resource Center, assist with STEM transfer field trips and the summer bridge academy, coordinate engagement activities, coordinate and schedule workshops and provide STEM career research assistance. Salary for year one of the grant, $45,050 for each of two positions, is based upon range 18 step 1 of the classified salary schedule ($44,150) October 2008 through June 2009 with a 5% step and an anticipated 3% COLA in July of 2009.

The Moreno Valley Campus will select one of its most expert and qualified STEM faculty to serve as the program’s Faculty Coordinator @ 100%. That position will: coordinate joint teaching activities and the visiting lecture series, oversee and participate in articulation efforts, establish joint use facilities and design a supplemental instruction program. Salary for year one of the grant, $71,829, is based upon range C step 7 of the faculty salary schedule ($70,573) October 2008 through June 2009 with a 4% step and an anticipated 3% COLA in July of 2009.
Funds have been allocated to pay faculty with particular expertise in the various STEM fields to: develop institutional practices and strategies, research and pilot alternate learning strategies and innovations, participate in articulation efforts, develop supplemental instruction programs, participate in faculty development and exchange activities, teach summer bridge academy workshops and perform other program-related work. Depending upon the particular faculty member’s teaching load, payment may be made through an overload assignment or a special project stipend. Either way, the rate of compensation per hour is governed by the faculty hourly salary schedule and is based upon the faculty member’s years of service teaching within the district; the hourly rate will range from $58.11 to $72.77. A total of $40,000 has been set aside in year one of the grant to cover the wide variety of activities described.

Supplemental instruction tutors will be hired on an hourly basis, determined by the need of students in the program. It is estimated that approximately 50 hours a week of tutoring will be needed for 46 weeks (16 weeks for each of the fall and spring terms, 8 weeks in the winter term and 6 weeks in the summer term) @ $12.00 per hour per the hourly employee salary schedule for a total of $27,600 in year one of the grant.

A Secretary II @ 100% will provide general administrative support to the program and maintain the files for necessary programmatic and fiscal documents. Salary for year one of the grant, $38,958, is based upon range 15 step 1 of the classified salary schedule ($38,180) October 2008 through June 2009 with a 5% step and an anticipated 3% COLA in July of 2009.

In addition to the Secretary II, an Office Assistant II will be employed on an hourly basis as is needed, based upon the administrative needs of the program. The hourly rate of pay is based upon that which is specified in the hourly employees’ salary schedule, $10.50 per hour for a maximum of 950 hours.
Fringe Benefits $163,031

Statutory benefits for academic staff (Project Director, STEM Counselor, Faculty Coordinator, and faculty working on overload or stipends) include 8.25% of salary for the State Teachers’ Retirement System, 1.45% for Medicare, .05% for State Unemployment Insurance, and 1.31% for Workers Compensation for a total of 11.06%. Statutory benefits for non-academic, classified staff (Outcomes Assessment Specialist, Educational Advisors, and the Secretary II) include 9.306% of salary for the Public Employees’ Retirement System, 6.2% for FICA, 1.45% for Medicare, .05% for State Unemployment Insurance and 1.31% for Workers’ Compensation for a total of 18.316%. Statutory benefits for hourly classified staff (Supplemental Instruction Tutors, Office Assistant II) include 1.45% for Medicare, .05% for State Unemployment Insurance and 1.31% for Workers’ Compensation for a total of 2.81%.

Health and welfare costs (medical, dental and life insurance plans) vary by the plan chosen and the number of family members covered. For the purposes of this budget, they have been estimated at $16,000 per year for a 100% position and pro-rated for positions less than 100%. Faculty overload or special project stipends as well as hourly classified positions do not incur health and welfare costs.

Travel $18,362

Funds have been allocated for the Project Director and one other staff member to participate in an annual professional development conference based on the following per person cost estimates: $550 for airfare, 3 nights lodging @ $259 per night, 4 days of meals @ $100 per day, $10 per day for parking, and $40 per day for transportation.
Funds have also been allocated to program staff members to attend a total of four out-of-state conferences, whose content would enhance effectiveness and contribution to the program. Costs have been estimated for each conference based on the following: $450 conference fee, $550 for airfare, 3 nights lodging @ $259 per night, 4 days of meals @ $100 per day, $10 per day for parking, and $40 per day for transportation. Funds have also been allocated for local program-related travel and mileage for all staff in the amount of $5,000.

Equipment $92,885

We have allocated $50,000 for the purchase of video-streaming equipment, which will allow us to receive and broadcast STEM lectures from STEM professors at the University of California, Riverside and Loma Linda University and offer them to our STEM students. We will equip and open a biotechnology lab for student use as well. With the $42,885 that has been allocated, we will purchase the following equipment that is required to operate the lab:

<table>
<thead>
<tr>
<th>Equipment Item</th>
<th>Quantity</th>
<th>Unit Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laminar Flow Hood</td>
<td>1</td>
<td>$9,800</td>
<td>$9,800</td>
</tr>
<tr>
<td>Refrigerated Centrifuge</td>
<td>2</td>
<td>$7,500</td>
<td>$15,000</td>
</tr>
<tr>
<td>UV/Visible Spectrophotometer</td>
<td>1</td>
<td>$7,500</td>
<td>$7,500</td>
</tr>
<tr>
<td>Fraction Collector with detector</td>
<td>1</td>
<td>$7,500</td>
<td>$7,500</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$39,800</td>
</tr>
<tr>
<td>Sub-total</td>
<td></td>
<td></td>
<td>$3,085</td>
</tr>
<tr>
<td>Tax @ 7.75%</td>
<td></td>
<td></td>
<td>$42,885</td>
</tr>
</tbody>
</table>
Supplies $215,586

A total of $30,000 has been allocated for instructional supplies, to include those consumable items necessary to the operation of the newly equipped biotechnology lab. A total of $10,000 has been allocated for the purchase of general, non-instructional supplies necessary for the operation of the program. A STEM library will be created and maintained with materials such as DVDs, texts, software and video and audio cassettes relating to specific STEM careers, test taking strategies, and references related to individual STEM field content, etc. A total of $40,000 has been allocated for the purchase of these materials. The program will equip and open for student use a STEM technology lab with thirty (30) computer stations. A total of $87,045 has been allocated to purchase these computers at an estimated cost of $2,600 each ($78,000) with 7.75% tax ($6,045) and shipping and handling costs of $3,000. In addition to the items specified under the “Equipment” category, the following supply items @ a total cost of $48,541 will also be needed in order to equip the biotechnology lab:

<table>
<thead>
<tr>
<th>Supply Item</th>
<th>Quantity</th>
<th>Unit Cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrophoresis</td>
<td>4</td>
<td>$800</td>
<td>$3,200</td>
</tr>
<tr>
<td>pH Meter Kits</td>
<td>3</td>
<td>$850</td>
<td>$2,550</td>
</tr>
<tr>
<td>Micro Centrifuge</td>
<td>1</td>
<td>$2,700</td>
<td>$2,700</td>
</tr>
<tr>
<td>Water Bath with shaker</td>
<td>2</td>
<td>$4,000</td>
<td>$8,000</td>
</tr>
<tr>
<td>Spectrophotometers (20D)</td>
<td>3</td>
<td>$2,500</td>
<td>$7,500</td>
</tr>
<tr>
<td>Analytical Balances</td>
<td>3</td>
<td>$3,000</td>
<td>$9,000</td>
</tr>
<tr>
<td>Hot Plates with stirrers</td>
<td>5</td>
<td>$600</td>
<td>$3,000</td>
</tr>
<tr>
<td>Micropipettes - Five sizes</td>
<td>10</td>
<td>$250</td>
<td>$2,500</td>
</tr>
</tbody>
</table>
Micropipette Tips Cases          4        $ 400        $ 1,600
Bunsen Burners Case              2        $ 2,500      $ 5,000
Sub-total                        $45,050

Tax @ 7.75%                      $ 3,491
Total for Biotechnology Lab      $48,541

Contractual $50,000

Dr. Laurie Riggs will serve as the program’s external evaluator and will be paid $35,000 for her work in year one. She will develop the formative and summative evaluation plan designs, analyze and interpret program data, provide results and recommendations to the program and provide assistance in reporting outcomes to the U.S. Department of Education. We have also allocated $15,000 to pay consultants with specific STEM education expertise to provide consultation in the areas of academic and student services to strengthen the academic culture by increasing faculty understanding of learner-centered instructional practices, learning communities and other innovations that lead to increased student learning and success.

Construction No funds are requested for construction.

Other $277,110

The program will purchase STEM skills-building software site licenses to be loaded onto the computers in the STEM technology lab. A total of $25,000 has been budgeted for software such as Skills Tutor and Cyber-Ed.
The new STEM Student Success Center will be located in a 2,000 square foot modular space. Leasing costs for this space have been estimated at $10,416.67 per month for a total of $125,000.

The program will have special STEM brochures to be used for outreach and $2,000 has been allocated for these brochures.

The program will pay the University of California, Riverside and Loma Linda University for access to STEM courses that will be video-streamed to the Moreno Valley Campus for STEM students to watch. It is estimated the cost of securing access to these courses will be $10,000 in year one of the grant.

The science labs at the University of California, Riverside (UCR) and/or Loma Linda University (LLU) offer equipment that is not feasible for the Moreno Valley Campus to purchase due to its exorbitant cost and/or the infrequency of its proposed use, therefore, in order to gain access to this equipment at a reasonable cost, fees will be paid to UCR and/or LLU and have been estimated at $1,000 per month for a total of $12,000.

In order to implement its proposed Faculty Exchange program, the Moreno Valley Campus will pay faculty scholars at the University of California, Riverside and/or Loma Linda University to provide Moreno Valley Campus faculty with the opportunity to incorporate innovation into curriculum content and pedagogical delivery. This will be done through having UCR and LLU faculty visit the Moreno Valley Campus and also sending Moreno Valley Campus faculty to shadow UCR and LLU faculty scholars at their home institution. It is estimated that $5,000 will be needed for this program component.

The program will pay approximately twenty (20) STEM student scholars at either the Moreno Valley Campus, the University of California, Riverside (UCR) and/or Loma Linda
University to mentor junior STEM students at the Moreno Valley Campus. Each mentor will receive compensation in the amount of $1,000 to serve as a mentor for the entire year, thus, a total of $20,000 has been allocated for this activity.

A Visiting Scholars lecture series will be developed and implemented where STEM scholars from the University of California, Riverside (UCR) and/or Loma Linda University will come to the Moreno Valley Campus to deliver lectures on the opportunities available in STEM fields and careers. These lectures will be available to all students to get them interested in pursuing a STEM pathway. It is estimated that the series will cost $10,000 to implement.

The program will also hire STEM faculty from nearby universities to serve as mentors to STEM faculty at the Moreno Valley Campus. A total of $5,000 has been allocated for this purpose.

The cost of postage for outreach, the summer bridge academy, appointment letters and other program-related correspondence has been estimated and budgeted at $2,500.

It is estimated that approximately thirty (30) high school students will participate in the STEM summer bridge academy that will be offered in the summer of 2009. Since many of these students will be low-income and will be participating in the academy for five full days, meals will be provided for them and are expected to cost approximately $9 each for a total allocation of $1,350. A monthly bus pass will also be given to each of these students to provide them with transportation to and from the summer bridge academy; these will cost $32 each for a total of $960. Speakers will be brought in from the various STEM fields and will need to be paid an honorarium; $5,000 has been budgeted for this purpose.

STEM transfer field trips will be organized for STEM students at the Moreno Valley Campus to familiarize them with the various programs and campuses to which they might be
interested in transferring to complete their 4-year STEM degree program and to encourage them to do so. One trip will be offered in year 1 with a maximum of 100 students; two buses will be needed at a cost of $1,200 for each bus for a total of $2,400. Students participating in these transfer field trips will be provided a lunch meal since each trip will last an entire day and involve going to multiple locations. It is estimated that each meal will cost approximately $9, thus $900 has been budgeted for this activity.

In collaboration with the University of California, Riverside (UCR), the Moreno Valley Campus will offer “Pathways to the Health Science and STEM Professions: A 5-day Residential Summer Intensive Transfer Experience for 50 Community College Students” @ a cost of $1,000 per student. The overall purpose of the program is to help community college students from diverse social, cultural and economic backgrounds to succeed in the health sciences and STEM fields and become more competitively qualified for admission into health and other STEM-related graduate programs at UCR that lead to health science and STEM careers. A total of $50,000 has been allocated for this residential summer experience.
Although the program does not require matching funds, the Moreno Valley Campus offers the following in-kind matching contribution that follows from its commitment to provide support at the highest administrative level to ensure program success and sustainability.

<table>
<thead>
<tr>
<th>Personnel</th>
<th>$29,786</th>
</tr>
</thead>
</table>

Dr. Monte Perez, President of the Moreno Valley Campus, will contribute 5% of his time to the program to: supervise the Project Director; provide vision and guidance in support of successful implementation; support the integration of the academic and student services areas within the Moreno Valley Campus; and continue to build and maintain collaborative relationships with senior administration at the University of California, Riverside, Loma Linda University and other 4-year institutions with whom we will articulate courses. Match contribution has been calculated based on a salary of $173,430 in year one of the grant.

Dr. Lisa Conyers, Vice President of Educational Services for the Moreno Valley Campus, will also contribute 5% of her time to the program to: support the Project Director in her efforts to plan and implement activities related to the academic division, as well as promote and support the integration of the academic and student services areas within the Moreno Valley Campus. Match contribution has been calculated based on a salary of $143,124 in year one of the grant.

Dr. Wolde-Ab Isaac, Dean of Health Science Programs at the Moreno Valley Campus, will contribute 10% of his time to the program to: support and assist the Project Director in her
efforts to plan and implement activities related to the health science disciplines within STEM and continue to build and maintain collaborative relationships with senior administration at the University of California, Riverside and Loma Linda University. Match contribution has been calculated based on a salary of $139,582 in year one of the grant.

**Fringe Benefits**

$6,986

Statutory benefits for the senior administrators listed above include 8.25% of salary for the State Teachers’ Retirement System, 1.45% for Medicare, .05% for State Unemployment Insurance, and 1.31% for Workers Compensation for a total of 11.06%. Health and welfare costs (medical, dental and life insurance plans) vary by the plan chosen and the number of family members covered. Dr. Perez will assume the presidency in July of 2008 and has not yet chosen his plan, thus, costs have been estimated at 5% of $14,000. Totals for Drs. Conyers and Isaac have been calculated using 5% and 10% respectively of an actual rate of $19,941 for each.
Personnel $480,015

In year two of the grant the Project Director will continue @ 100% and have responsibility for the overall management of the program and staff to ensure that all goals and objectives are met. Budgeted costs for this position are based upon a salary range of 13.1 of the management salary schedule ($77,184) for October 2009 through June 2010 with a 1% step (longevity) and a 3% anticipated cost-of-living (COLA) increase in July of 2010 (effective for July, August and September of year two of the grant) for a total of $77,962. The college’s fiscal year runs from July to June, thus, salaries increase due to longevity and cost-of-living increases each July. Please note: Professional salaries in the state of California are necessarily higher than in other parts of the nation due to an extremely high cost of living; a salary at this level will allow the Moreno Valley Campus to hire a highly qualified individual with the STEM expertise necessary to ensure program success.

A 100% Science, Technology, Engineering and Math (STEM) Counselor will continue to: provide career guidance to students and refer them to critically needed resources, both within the college and in the outside community; follow-up with students identified by the Early Alert system as being at-risk; track and monitor students’ progress in all aspects of their program participation; organize and oversee engagement activities; develop and deliver special STEM guidance courses; assist with the STEM transfer field trips; refer students for tutoring and the mentoring program; and assist with the summer bridge academy/program. Salary for year two of
the grant, $69,245, is based upon range C step 4 of the counselor salary schedule ($68,034) October 2009 through June 2010 with a 4% step and an anticipated 3% COLA in July of 2010.

The program will also continue to employ an Outcomes Assessment Specialist @ 50% to: develop systems for the collection of necessary program data, collect and analyze data and work with the external evaluator to provide feedback relating to formative evaluation and continuous program improvement. Salary for year two of the grant, $37,090, is based upon 50% of range 12.6 on the management salary schedule ($73,441) October 2009 through June 2010 with a 1% step and an anticipated 3% COLA in July of 2010.

Two (2) Educational Advisors, each @ 100% will continue to: organize mentorship activities, operate the STEM Career and Transfer Center, maintain the STEM Resource Center, assist with STEM transfer field trips and the summer bridge academy, coordinate engagement activities, coordinate and schedule workshops and provide STEM career research assistance. Salary for year two of the grant, $48,721 for each of two positions, is based upon range 18 step 2 of the classified salary schedule ($47,748) October 2009 through June 2010 with a 5% step and an anticipated 3% COLA in July of 2010.

The Moreno Valley Campus will continue to employ one of its most expert and qualified STEM faculty to serve as the program’s Faculty Coordinator @ 100%. That position will: coordinate joint teaching activities and the visiting lecture series, oversee and participate in articulation efforts, establish joint use facilities and design a supplemental instruction program. Salary for year two of the grant, $76,943, is based upon range C step 8 of the faculty salary schedule ($75,598) October 2009 through June 2010 with a 4% step and an anticipated 3% COLA in July of 2010.
Funds have been allocated to pay faculty with particular expertise in the various STEM fields to: develop institutional practices and strategies, research and pilot alternate learning strategies and innovations, participate in articulation efforts, develop supplemental instruction programs, participate in faculty development and exchange activities, teach summer bridge academy workshops and perform other program-related work. Depending upon the particular faculty member’s teaching load, payment may be made through an overload assignment or a special project stipend. Either way, the rate of compensation per hour is governed by the faculty hourly salary schedule and is based upon the faculty member’s years of service teaching within the district; the hourly rate will range between $59.86 and $74.96. A total of $40,000 has been set aside in year two of the grant to cover the wide variety of activities described.

Supplemental instruction tutors will be hired on an hourly basis, determined by the need of students in the program. It is estimated that approximately 50 hours a week of tutoring will be needed for 46 weeks (16 weeks for each of the fall and spring terms, 8 weeks in the winter term and 6 weeks in the summer term) @ $12.50 per hour per the hourly employee salary schedule for a total of $28,750 in year two of the grant.

A Secretary II @ 100% will provide general administrative support to the program and maintain the files for necessary programmatic and fiscal documents. Salary for year two of the grant, $42,133, is based upon range 15 step 2 of the classified salary schedule ($41,292) October 2009 through June 2010 with a 5% step and an anticipated 3% COLA in July of 2010.

In addition to the Secretary II, an Office Assistant II will be employed on an hourly basis as is needed, based upon the administrative needs of the program. The hourly rate of pay is based upon that which is specified in the hourly employees’ salary schedule, with an anticipated
increase of .50 per hour in 2009-10 added, thus $11.00 per hour for a maximum of 950 hours has been allocated.

Fringe Benefits $177,076

Statutory benefits for academic staff (Project Director, STEM Counselor, Faculty Coordinator, and faculty working on overload or stipends) include 8.25% of salary for the State Teachers’ Retirement System, 1.45% for Medicare, .05% for State Unemployment Insurance, and 1.31% for Workers Compensation for a total of 11.06%. Statutory benefits for non-academic, classified staff (Outcomes Assessment Specialist, Educational Advisors, and the Secretary II) include 9.306% of salary for the Public Employees‘ Retirement System, 6.2% for FICA, 1.45% for Medicare, .05% for State Unemployment Insurance and 1.31% for Workers’ Compensation for a total of 18.316%. Statutory benefits for hourly classified staff (Supplemental Instruction Tutors, Office Assistant II) include 1.45% for Medicare, .05% for State Unemployment Insurance and 1.31% for Workers’ Compensation for a total of 2.81%. Health and welfare costs (medical, dental and life insurance plans) vary by the plan chosen and the number of family members covered. For the purposes of this budget, they have been estimated at $17,600 per year for a 100% position and pro-rated for positions less than 100%. Faculty overload or special project stipends as well as hourly classified positions do not incur health and welfare costs.

Travel $18,362

Funds have been allocated for the Project Director and one other staff member to participate in an annual professional development conference based on the following per person
cost estimates: $550 for airfare, 3 nights lodging @ $259 per night, 4 days of meals @ $100 per
day, $10 per day for parking, and $40 per day for transportation.

Funds have also been allocated to allow program staff members to attend a total of four
out-of-state conferences, whose content would enhance effectiveness and contribution to the
program. Costs have been estimated for each conference based on the following: $450
conference fee, $550 for airfare, 3 nights lodging @ $259 per night, 4 days of meals @ $100 per
day, $10 per day for parking, and $40 per day for transportation. Funds have also been
allocated for local program-related travel and mileage for all staff in the amount of $5,000.

Equipment

No equipment is requested for year two.

Supplies

$20,000

A total of $10,000 has been allocated for instructional supplies, including those needed
for the operation of the biotechnology lab. A total of $10,000 has been allocated for the
purchase of general, non-instructional supplies necessary for the operation of the program.

Contractual

$55,000

Dr. Laurie Riggs will serve as the program’s external evaluator and will be paid $40,000
for her work in year two. She will continue to revise the formative and summative evaluation
plan designs as is necessary for the successful evaluation of the program, analyze and interpret
program data, provide results and recommendations to the program and provide assistance in
reporting outcomes to the U.S. Department of Education. However, in year two, she will also
develop and implement a longitudinal evaluation design to enable the reporting of five-year
outcomes. We have also allocated $15,000 to pay consultants with specific STEM education expertise to provide consultation in the areas of academic and student services to strengthen the academic culture by increasing faculty understanding of learner-centered instructional practices, learning communities and other innovations that lead to increased student learning and success.

**Construction**

No funds are requested for construction.

**Other**

$272,100

The program will maintain its STEM skills-building software site licenses that will be loaded onto the computers in the STEM technology lab. A total of $25,000 has been budgeted for software such as Skills Tutor and Cyber-Ed.

The new STEM Student Success Center will be located in a 2,000 square foot modular space. Leasing costs for this space have been estimated at $10,416.67 per month for a total of $125,000.

The program will have special STEM brochures to be used for outreach and $1,000 has been allocated for these brochures.

The program will pay the University of California, Riverside and Loma Linda University for access to STEM courses that will be video-streamed to the Moreno Valley Campus for STEM students to watch. It is estimated the cost of securing access to these courses will be $10,000 in year two of the grant.

The science labs at the University of California, Riverside (UCR) and/or Loma Linda University (LLU) offer equipment that is not feasible for the Moreno Valley Campus to purchase due to its exorbitant cost and/or the infrequency of its proposed use, therefore, in order to gain
access to this equipment at a reasonable cost, fees will be paid to UCR and/or LLU and have been estimated at $1,000 per month for a total of $12,000.

In order to implement its proposed Faculty Exchange program, the Moreno Valley Campus will pay faculty scholars at the University of California, Riverside and/or Loma Linda University to provide Moreno Valley Campus faculty with the opportunity to incorporate innovation into curriculum content and pedagogical delivery. This will be done through having UCR and LLU faculty visit the Moreno Valley Campus and also sending Moreno Valley Campus faculty to shadow UCR and LLU faculty scholars at their home institution. It is estimated that $5,000 will be needed for this program component.

The program will pay approximately twenty (20) STEM student scholars at either the Moreno Valley Campus, the University of California, Riverside (UCR) and/or Loma Linda University to mentor junior STEM students at the Moreno Valley Campus. Each mentor will receive compensation in the amount of $1,000 to serve as a mentor for the entire year, thus, a total of $20,000 has been allocated for this activity.

A Visiting Scholars lecture series will be developed and implemented where STEM scholars from the University of California, Riverside (UCR) and/or Loma Linda University will come to the Moreno Valley Campus to deliver lectures on the opportunities available in STEM fields and careers. These lectures will be available to all students to get them interested in pursuing a STEM pathway. It is estimated that the series will cost $10,000 to implement.

The program will also hire STEM faculty from nearby universities to serve as mentors to STEM faculty at the Moreno Valley Campus. A total of $5,000 has been allocated for this purpose.
The cost of postage for outreach, appointment letters and other program-related correspondence has been estimated and budgeted at $2,500.

STEM transfer field trips will be organized for STEM students at the Moreno Valley Campus to familiarize them with the various programs and campuses to which they might be interested in transferring to complete their 4-year STEM degree program and to encourage them to do so. A minimum of two trips will be offered in year 2, collectively serving approximately 200 students; four buses will be needed at a cost of $1,200 for each bus for a total of $4,800. Students participating in these transfer field trips will be provided a lunch meal since each trip will last an entire day and involve going to multiple locations. It is estimated that each meal will cost approximately $9, thus $1,800 has been budgeted for this activity.

In collaboration with the University of California, Riverside (UCR), the Moreno Valley Campus will offer “Pathways to the Health Science and STEM Professions: A 5-day Residential Summer Intensive Transfer Experience for 50 Community College Students” @ a cost of $1,000 per student. The overall purpose of the program is to help community college students from diverse social, cultural and economic backgrounds to succeed in the health sciences and STEM fields and become more competitively qualified for admission into health and other STEM-related graduate programs at UCR that lead to health science and STEM careers. A total of $50,000 has been allocated for this residential summer experience.
Although the program does not require matching funds, the Moreno Valley Campus offers the following in-kind matching contribution that follows from its commitment to provide the support at the highest administrative level to ensure program success and sustainability.

**Personnel**  
$29,786

Dr. Monte Perez, President of the Moreno Valley Campus, will contribute 5% of his time to the program to: supervise the Project Director; provide vision and guidance in support of successful implementation; support the integration of the academic and student services areas within the Moreno Valley Campus; and continue to build and maintain collaborative relationships with senior administration at the University of California, Riverside, Loma Linda University and other 4-year institutions with whom we will articulate courses. Match contribution has been calculated based on a salary of $173,430 in year two of the grant.

Dr. Lisa Conyers, Vice President of Educational Services for the Moreno Valley Campus, will also contribute 5% of her time to the program to: support the Project Director in her efforts to plan and implement activities related to the academic division, as well as promote and support the integration of the academic and student services areas within the Moreno Valley Campus. Match contribution has been calculated based on a salary of $143,124 in year two of the grant.

Dr. Wolde-Ab Isaac, Dean of Health Science Programs at the Moreno Valley Campus, will contribute 10% of his time to the program to: support and assist the Project Director in her
efforts to plan and implement activities related to the health science disciplines within STEM and continue to build and maintain collaborative relationships with senior administration at the University of California, Riverside and Loma Linda University. Match contribution has been calculated based on a salary of $139,582 in year two of the grant.

Fringe Benefits $7,354

Statutory benefits for the senior administrators listed above include 8.25% of salary for the State Teachers’ Retirement System, 1.45% for Medicare, .05% for State Unemployment Insurance, and 1.31% for Workers Compensation for a total of 11.06%. Health and welfare costs (medical, dental and life insurance plans) vary by the plan chosen and the number of family members covered. Dr. Perez will assume the presidency in July of 2008 and has not yet chosen his plan, thus, costs have been estimated at 5% of $15,400. Totals for Drs. Conyers and Isaac have been calculated using 5% and 10% respectively of an actual rate of $21,935 for each.