SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

1. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Increase the transfer of Hispanic and low-income students from College of the Canyons and Glendale Community College to CSUN in STEM fields

1.a. Performance Measure*	Measure Type	Quantitative Data					
		Target			Actual Performance Data		
		Raw Number	Ratio	%	Raw Number	Ratio	%
After two years, increase by 15 the number of Hispanic and low-income students who transfer from College of the Canyons and Glendale Community College to CSUN in STEM fields over the 2010-11 baseline number**	Project	36	/		47	/	

***CSUN institutional data**
****Baseline data per Instructions for Grant Performance Report**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective

During the current performance period, we collected actual performance data on the single performance measure for this objective. Quantitative data sources for both baseline and actual performance data for this measure are from CSUN institutional data (from CSUN's Office of Institutional Research). During the performance periods for the last five project years, we worked with CSUN's Office of Institutional Research to prepare the 2010-11 baseline data on student transfer figures for both College of the Canyons (COC) and Glendale Community College (GCC) and to produce the 2015-16 figures of actual performance data for the current (fifth year) performance period.

Description of Preliminary Findings Related to the Objective

The baseline data for this measure (1a) is from CSUN's Office of Institutional Research and includes institutional data (i.e., not project cohort data). Accordingly, the baseline data do not correspond to the number of project cohort participants but rather to all students who met the criteria for inclusion in the transfer cohort (see next sentence). The 2010-11 baseline data for all Hispanic and/or low-income (i.e., Pell grant recipients) students who transferred from College of the Canyons and Glendale Community College to CSUN planning to major in a field in the College of Engineering and Computer Science follows: 14 students from College of the Canyons and seven from Glendale Community College, for a total of 21 students from both colleges. Consequently, the target number of Hispanic and low-income students who will have transferred from College of the Canyons and Glendale Community College by Spring 2013 (two academic years from baseline) is 36, which represents an increase of 15 over the 2010-11 baseline number. When we interpret actual performance data against the project target of 36, we find that 47 students transferred from College of the Canyons and Glendale Community College in 2015-16. That is, 47 new CSUN transfer students entered in 2015-16 from College of the Canyons and Glendale Community College planning to major in a field housed in the College of Engineering and Computer Science. The increase in the number of new transfer students in 2015-16 (n=47) represents approximately a 131% increase over the project target (n=36) and a 224% increase over the baseline figure (n=21) from 2010-11. In the current performance period, we can say that this project objective has been achieved given the performance data on this measure.

Description of Project Activities Related to the Objective

During the performance period, project faculty and staff worked to support the achievement of this objective through their efforts with cohort participants at College of the Canyons and Glendale Community College. Over the five project years, faculty mentors and project staff maintained student cohorts at both College of the Canyons and Glendale Community College. Anticipated and actual project activities at both community colleges include tutoring, mentoring, academic excellence workshops (College of the Canyons), textbook award program, joint leadership conference (College of the Canyons), joint outreach efforts (College of the Canyons), engineering boot camps (College of the Canyons), speed mentoring events (Glendale Community College), and a student organized Maker Faire Conference (Glendale Community College). In addition, project faculty at both CSUN and College of the Canyons/Glendale Community College have worked collaboratively to support early contact and connections between community college students and CSUN, including community college cohort attendance at CSUN's Senior Project Design Showcase; CSUN's Tech Fest; an AIMS^2 social with CSUN, COC, and GCC students; other events at CSUN; and events hosted by and on Glendale Community College's/College of the Canyon's campuses for project faculty and students across institutions to attend. Finally, during the performance period, select CSUN, Glendale Community College, and College of the Canyons cohort students participated in CSUN faculty mentor research projects during the Summer 2016 session (see "Description of Project Activities Related to the Objective" for Objective 10 below).

Plans to Use of Performance Data to Monitor Progress

With actual performance data for the last five project years for the performance measure of this objective, we plan to publish the figures from this year's report on our project's website (http://www.ecs.csun.edu/aims2/) and discuss progress related to COC/GCC transfer students at our project meetings. To support transfers to CSUN, we developed relationships through outreach to colleges like Los Angeles Mission College, Los Angeles Pierce College, and Moorpark Community College, from which we had participants in their Title V/HSI-STEM grant join a summer research project with CSUN AIMS^2 faculty and transfer to CSUN.

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

2. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Increase the number of courses that articulate from College of the Canyons and Glendale Community College to CSUN and articulation agreements between College of the Canyons and Glendale Community College and CSUN

2.a. Performance Measure*	Measure Type	Quantitative Data					
		Target			Actual Performance Data		
Increase by 15 the number of STEM courses that articulate over the 2010-11 baseline number**	Project	Raw Number	Ratio	%	Raw Number	Ratio	%
		92	/		92	/	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Baseline data per Instructions for Grant Performance Report**

2.b. Performance Measure*	Measure Type	Quantitative Data					
		Target			Actual Performance Data**		
Increase by 15 the number of articulation agreements over the 2010-11 baseline number**	Project	Raw Number	Ratio	%	Raw Number	Ratio	%
		92	/		92	/	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Baseline data per Instructions for Grant Performance Report**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective

The two performance measures (2a and 2b) for this objective assess the same outcome: articulated courses. In the case of this objective, an articulated course is equivalent to an articulation agreement within the context of this project. Accordingly, performance measures 2a and 2b use the same baseline data and actual performance data. Document data collection (e.g., of course articulation agreements) and review constitute the data collection procedures for these two performance measures of this objective. We initiated data collection for these two performance measures in February 2012 (four years prior to this performance period) and have continued data collection through the current performance period as project faculty coordinate the articulation and curriculum approval process at College of the Canyons, Glendale Community College, and CSUN. Document data analysis for these two performance measures includes reviews to confirm the status of articulated courses and articulation agreements. In addition, Glendale Community College uses an online student-transfer information system to track progress on these two performance measures (see below under "Project Activities at Glendale Community College"). Finally, we include a discussion of course articulation, as needed, at monthly AIMS^2 project team meetings to confirm document data records at each site.

Description of Preliminary Findings Related to the Objective

Actual performance data for these two performance measures of this objective indicate that 77 courses articulated between College of the Canyons/Glendale Community College and CSUN. Specifically, data collected through documents reveal that a total of 41 courses articulated between College of the Canyons and CSUN and a total of 36 courses articulated between Glendale Community College and CSUN. Of the 77 courses that articulated, remedial math courses had been excluded from the count and six courses had been missing labs (four at College of the Canyons and two at Glendale Community College). Accordingly, the total of 77 courses that articulated between both community colleges and CSUN constituted the baseline performance measure. Meanwhile, a total of 12 courses had not articulated between College of the Canyons and CSUN and 17 courses had not articulated between Glendale Community College and CSUN, for a total of 29 courses in the fields of engineering and computer science. Given the project target of 15 new articulated courses, the total number of courses that needed to articulate between CSUN and the two community colleges was 92, which represented the project target number.

During each of the five project periods, faculty and staff at CSUN, COC, and GCC coordinated efforts to articulate courses. Consequently, during the first, second, third, and fifth project periods of performance evaluation, 5 courses had been articulated between CSUN and COC and 10 courses had been articulated between CSUN and GCC, for a total of 15 articulated courses between CSUN and COC/GCC. Given the project increase of 15 and project target of 92 articulated courses/articulation agreements, the actual performance data for this period demonstrate achievement of this objective. Indeed, with the five articulated courses from the first project year, six articulated courses from the second project year, three articulated courses from the third project year, and one articulated course from the fifth project year, the total number of articulated courses at the end of the five performance periods is 92—which meets the project target (n=92). We note that during the second project year, COC, GCC and CSUN faculty and staff worked to articulate additional courses: COC's ENGR 114 with CSUN's ME 186/186L and GCC's ENGR 111 with CSUN's ME 186/186L. These course articulations had been included in the total number of articulated courses for the last performance period, but recently these course articulations have come under review. More specific details about the courses articulated and under review during the period can be found in the sections immediately below.

Preliminary Findings of College of the Canyons

During the five project performance periods, the following courses have been articulated between CSUN and COC:

CE 240 and 240/L at CSUN is articulated with COC ENGR 152 (Articulated Pre-Project/Updated Project Year 2)
CMT 110/L at CSUN articulates with COC CONST 103 (Project Year 2)
CMT 208/L at CSUN articulates with COC SURV 101 (Project Year 1)
CMT 210/L at CSUN articulates with COC CONST 106 (Project Year 2)
MSE 227 and 227/L at CSUN articulates with COC ENGR 151L (Project Year 2)

Preliminary Findings of Glendale Community College

During the five project performance periods, the following courses have been articulated between CSUN and GCC:

CE 240/L at CSUN articulates with GCC ENGR 152 (Project Year 2)
CIT 101/L at CSUN articulates with GCC CSIS 101 (Project Year 1)
CIT 160/L at CSUN articulates with GCC CSIS 260 (Project Year 1)
CM 110/L at CSUN articulates with GCC ARCH 102 (Project Year 5)
COMP 108 at CSUN articulates with GCC CSIS 112 (Project Year 1)
COMP 122/L at CSUN articulates with GCC CSIS 165 (Project Year 1)
COMP 256/L at CSUN articulates with GCC CSIS 125 (Project Year 3)
ECE 240/L at CSUN articulates with GCC ENGR 240 (Project Year 3)
ME 209 at CSUN articulates with GCC ENGR 156 (Project Year 3)
MSE 227 and 227/L at CSUN articulates with GCC ENGR 146 (Project Year 2)

Description of Project Activities Related to the Objective

During the first three project performance periods, project faculty made meaningful progress toward meeting these two performance measures. In fact, project faculty from CSUN, College of the Canyons, and Glendale Community College met to discuss course articulation. Since December 2011, project faculty members have met at monthly project team meetings. In fact, we include a discussion of course articulation as a standing agenda item at monthly AIMS^2 project team meetings. At two monthly project team meetings (February 9, 2012, and March 15, 2012), project faculty established a framework to develop course articulation agreements and worked on articulating the individual courses listed above and additional courses below through the formation of work groups based on their disciplinary backgrounds and department affiliations (e.g., computer science, civil engineering and construction management, manufacturing systems engineering, etc.) and assigned themselves specific courses to review, revise, and articulate. During select monthly project team meetings of the five performance periods (February 2012 through September 2016), faculty from CSUN, COC, and GCC reported on their collaboration through the articulation process. The meetings provided an opportunity for the faculty from each campus to discuss their most recent collaborations and to report updated articulation findings. Outside of project team meetings, faculty exchanged course syllabi, course outlines, and consulted with curriculum committees on their respective campuses (COC/GCC). The articulation process included course equivalencies by examining respective course syllabi and course outlines for course descriptions, objectives/outcomes, and content for each community college course with CSUN's course.

Descriptive of Project Activities at College of the Canyons

In the third project performance period, College of the Canyons engineering faculty worked with CSUN faculty members to articulate one course and two labs. These included articulation between CSUN's ME 186/186L and COC's ENGR 114 and CSUN's MSE 227L and COC's ENGR 151L (completed—see above). Yet in the current performance period, the articulation between CSUN's ME 186/186L and COC's Engineering 114 is under review. CSUN's ME 186/186L and COC's ENGR 114 are both computer-aided design (CAD) classes. Faculty at CSUN and COC are working together to determine the various CAD programs being taught in each course in order to verify adequate preparation for upper level CSUN courses. In addition, COC and CSUN faculty updated CE 240 and CE 240/L (CSUN) and ENGR 152 (COC) to comply with articulation requirements of SB 1440. That is, CE 240 and 240 L had been articulated prior to the start of the project, but recent changes that were made to comply with the system-wide mandate (SB 1440) for transfer model curricula. Faculty in CSUN's Computer Science department are also working with faculty in COC's Computer Information Technology department to determine which courses could be developed at COC that would ease student transfer to the CSUN's computer science department. Faculty in CSUN's Construction Management department are also working with faculty in COC's Construction Management and Land Surveying departments to determine which courses could be developed at COC that would ease student transfer to the CSUN's construction management department. Articulations include Construction-103 and CSUN's CMT110/L, COC's Construction-106 and CSUN's CMT210/L, and COC's Surveying-101 and CSUN's CMT208/L (see above). These faculty-faculty conversations about articulation issues have yielded multiple course pathways so that community college students can successfully complete key lower-division courses prior to transfer. We measure the progress made during these discussions on the articulation of courses between COC and CSUN by monitoring the development of Memoranda of Understanding (MOUs) between individual departments at the two campuses. We also track the articulated courses in the curriculum approval process at COC and the number of fully articulated courses through a record of curriculum committee meetings.

Descriptive of Project Activities at Glendale Community College

In the current (fifth) performance period, Glendale Community College faculty and staff coordinated with CSUN faculty to articulate GCC's ARCH 102 and CSUN's CM 110. Meanwhile, in the performance period for the third project year, Glendale Community College faculty worked with CSUN faculty to finalize the articulation of three courses. These included articulation between CSUN's COMP 256L and GCC's CSIS 125, CSUN's ECE 240L and GCC's ENGR 240, and CSUN's ME 209 and GCC's ENGR 156 (completed—see above). In the second project performance period, GCC faculty worked with CSUN faculty members to articulate CSUN's ME 186/186L and GCC's ENGR 111. Yet in the current performance period, the articulation between CSUN's ME 186/186L and GCC's ENGR 111 is under review. CSUN's ME 186/186L and GCC's ENGR 111 are both computer-aided design (CAD) classes. Faculty at CSUN and GCC are working together to determine the various CAD programs being taught in each course in order to verify adequate preparation for upper level CSUN courses. With some courses that articulated between CSUN and GCC, Professor Rubke and Professor Voden from GCC collaborated closely with several of the courses; however, the curriculum committees at their college also provided input into the articulation process. Professor Melara from CSUN updated and articulated the computer science courses through her requests of each course syllabi.

Plans to Use of Performance Data to Monitor Progress

While we have met the project target, we plan to continue measuring progress of new articulated courses on these two measures through document data collection (e.g., course articulation agreements) and review. Data collection will occur as project faculty complete the articulation and curriculum approval process at College of the

Canyons, Glendale Community College, and CSUN. As with the courses articulated during the current and previous performance periods, we plan to continue the documentation of course articulation work that supports our collaborative approach in the curriculum revision process and submission of revised courses to curriculum committees at our respective campuses once courses have been articulated.

Grant Performance Report (ED 524B)
Project Status Chart

PR/Award # (11 characters): P031C110031

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

3. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Enhance the academic advising/counseling capacity of College of the Canyons and Glendale Community College in STEM fields

3.a. Performance Measure* for College of the Canyons**	**Measure Type**	**Quantitative Data**					
		Target			**Actual Performance Data**		
		Raw Number	**Ratio**	**%**	**Raw Number**	**Ratio**	**%**
Increase by two the number of counselors at College of the Canyons and Glendale Community College who participate in STEM professional development workshops over the 2010-11 baseline number***	**Project**	**2**	**/**		**2**	**2/2**	**100**

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Baseline data per Instructions for Grant Performance Report**

3.a. Performance Measure* for Glendale Community College**	**Measure Type**	**Quantitative Data**					
		Target			**Actual Performance Data*** **		
		Raw Number	**Ratio**	**%**	**Raw Number**	**Ratio**	**%**
Increase by two the number of counselors at College of the Canyons and Glendale Community College who participate in STEM professional development workshops over the 2010-11 baseline number***	**Project**	**2**	**/**		**2**	**/**	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Baseline data per Instructions for Grant Performance Report**

3.b. Performance Measure* for College of the Canyons**	**Measure Type**	**Quantitative Data**** **					
		Target			**Actual Performance Data**		
		Raw Number	**Ratio**	**%**	**Raw Number**	**Ratio**	**%**
Increase by four the number of advising/counseling sessions with students in STEM fields over the 2010-11 baseline number***	**Project**	**13**	**/**		**13**	**/**	
		30			**32**		

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**

3.b. Performance Measure* for Glendale Community College**	Measure Type	Quantitative Data					
Increase by four the number of advising/counseling sessions with students in STEM fields over the 2010-11 baseline number***	Project	Target			Actual Performance Data****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
		113			257		

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Numbers reported cannot be disaggregated per cohort and are combined for the two cohorts of students enrolled in 2015-16.**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective
College of the Canyons and Glendale Community College report their respective data sources and methods below.

Evaluation Data Sources and Methods at College of the Canyons
College of the Canyons used a combination of document data sources and collection methods—including counseling appointments, student educational plans, and attendance at the transfer planning events—to establish baseline data for these performance measures.

Evaluation Data Sources and Methods at Glendale Community College
Glendale Community College STEM and general counselors were asked to track and report any STEM professional development workshops they attended to the AIMS^2 Counselor/Coordinator. The AIMS^2 Counselor/Coordinator also tracked counseling appointments, including meetings to discuss student educational plans. An online student survey was also administered to gather additional information in regards to AIMS-related services utilized by students.

Description of Preliminary Findings Related to the Objective
Preliminary findings for each college are reported below.

Preliminary Findings of College of the Canyons
For performance measure 3a, College of the Canyons reports that two (2) counselors have participated in staff development activities. Also, during this performance period, we supported one (1) of our counseling faculty members, along with students, on two trips to participate in the Society for Hispanic Professional Engineers (SHPE) conference and Great minds in STEM (HENAAC) conference so that they will have the tools that they need to successfully prepare our AIMS^2 scholars for transfer. Given actual performance data, performance measure 3a has been achieved during the period.

With respect to performance measure 3b, we see that Cohort 4 (n=3) had a total of 13 counseling contacts and Cohort 5 (n=15) logged a total of 32 contacts for a total of 47 contacts with AIMS^2 counselor(s) during the performance period. These numbers were based on Counseling Appointments (13 for Cohort 4 and 30 for Cohort 5), Student Ed Plan sessions (4 for Cohort 4 and 15 for Cohort 5) and transfer planning events (9 for Cohort 4 and 17 for Cohort 5) for a total of 13 sessions with students in Cohort 4 and 32 in Cohort 5. We will monitor the amount of progress toward the above objectives by tracking the number of counseling appointments and the number of SEPs created or modified and attendance at the transfer planning events. Given actual performance data, performance measure 3b has been achieved for Cohort 4 as well as Cohort 5 during the period.

Preliminary Findings of Glendale Community College
3a) Two (2) counselors attended STEM workshops and/or conferences, meeting the number set as the target. These professional development opportunities included the SHPE (Society for Hispanic Professional Engineers) National Conference (November 11-15, 2015) and the SHPE Regional conference (April 14-17, 2016). Given actual performance data, performance measure 3a has been achieved during the period.

3b) The AIMS^2 Counselor/Coordinator recorded 257 counseling sessions with students during 2015/16 for an average of 15 counseling sessions per student.

Description of Project Activities Related to the Objective

Specific project activities at College of the Canyons and Glendale Community College, respectively, are detailed below.

Project Activities at College of the Canyons

During this performance period, our counseling plan includes having our AIMS^2 scholars meet with counseling faculty twice a semester for every semester they are involved in the program at COC. These appointments result in the development of a Student Educational Plan (SEP) for each scholar. Our counselors also provide informational workshops on transfer planning during the fall semesters to support the scholars' transfer process. One of our counselors also had the chance to attend the SHPE conference to assist our scholars with perfecting their personal statements for transfer.

Project Activities at Glendale Community College

Students participating in the program are required to meet one-on-one with the AIMS^2 Counselor/Coordinator at least once per semester, but most met with the counselor multiple times. During these sessions, students develop or update their Student Educational Plans (SEP) and are advised on prerequisite courses. The following comments from students indicate the helpfulness of the AIM counselors:

"What I liked about AIMS is the fact that we as a group kind of became a family, as students and professors. Also, knowing the fact that I have a counselor such as Dr. Cortes and Marisela for guidance when I need advice about classes or other academic matters is a huge ease at mind being a student, especially when feeling lost or out of options about choices."

"I really like about it is we have support from counselors."

"They [counselors] make sure that we stay full time. He makes sure that we keep our GPA, and make sure that we will be in all of our classes."

"Not enough could possibly be said about the usefulness of this program. The support services and academic enrichment provided are invaluable. Constantly challenging us with new experiences created an enriching environment that manifested itself in academic persistence and achievement."

Plans to Use of Performance Data to Monitor Progress

At College of the Canyons, progress toward the above performance measures of this objective will be tracked the number of counseling appointments, the number of SEPs created or modified, and attendance at the transfer planning events. Meanwhile, At Glendale Community College, progress toward the above performance measures of this objective will be tracked by the number of counseling sessions students have, results from a survey, and recording counselor(s) attendance at professional development workshops.

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

4. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Enhance the academic participation/transfer readiness rate of College of the Canyons and Glendale Community College students in STEM fields

4.a. Performance Measure* for College of the Canyons**	Measure Type	Quantitative Data***					
		Target			Actual Performance Data*****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by 75 percent the College of the Canyons and Glendale Community College students who participate in tutoring sessions in STEM classes and who participate in STEM academic workshops over the 2010-11 baseline rate****	Project		3/3	100		3/3	100
			11/15	75		15/15	100

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College, given differences in target/actual performance data for this reporting period.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
*******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**

4.a. Performance Measure* for Glendale Community College**	Measure Type	Quantitative Data*****					
		Target			Actual Performance Data*****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by 75 percent the College of the Canyons and Glendale Community College students who participate in tutoring sessions in STEM classes and who participate in STEM academic workshops over the 2010-11 baseline rate****	Project		8/15	53		11/15	73

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
*******Numbers reported cannot be disaggregated per cohort and are combined for the two cohorts of students enrolled in 2015-16**

4.b. Performance Measure* College of the Canyons**	Measure Type	Quantitative Data***					
		Target			Actual Performance Data*****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by ***25*** percent the College of the Canyons and Glendale Community College students who enroll in online courses ***at any college or university*** over the 2010-11 baseline rate****	**Project**						
The above performance measure is revised from the original performance measure (Increase by 75 percent the College of the Canyons and Glendale Community College students who enroll in online courses with CSUN faculty over the 2010-11 baseline rate).			**1/3**	**33**		**2/3**	**66**
			5/15	**33**		**6/15**	**40**

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
*******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**

4.b. Performance Measure* for Glendale Community College**	Measure Type	Quantitative Data***					
		Target			Actual Performance Data*****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by ***25*** percent the College of the Canyons and Glendale Community College students who enroll in online courses ***at any college or university*** over the 2010-11 baseline rate****	**Project**						
The above performance measure is revised from the original performance measure (Increase by 75 percent the College of the Canyons and Glendale Community College students who enroll in online courses with CSUN faculty over the 2010-11 baseline rate).			**4/15**	**27**		**5/15**	**33**

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
*******Numbers reported cannot be disaggregated per cohort and are combined for the two cohorts of students enrolled in 2015-16**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

<u>Evaluation Data Sources and Methods for the Objective</u>
College of the Canyons and Glendale Community College report their respective data sources and methods below.

Evaluation Data Sources and Methods at College of the Canyons
College of the Canyons collected data on student participation in tutoring sessions and workshops through an existing MESA program tracking mechanism.

Evaluation Data Sources and Methods at Glendale Community College
A tutoring log is maintained by the counselors who document the number of tutoring sessions that occur. Glendale Community College also uses an online student survey to document the types of services and programs students participated in during the academic year.

Description of Preliminary Findings Related to the Objective
Preliminary findings for each college are reported below.

Preliminary Findings of College of the Canyons
We developed a tracking mechanism for our AIMS^2 student cohort in order to quantify their time with both peer and faculty tutors. For performance measure 4a, given current baseline data reported by College of the Canyons, project targets have been established that are intended to achieve the percent increase in both performance measures related to increases in the number of students (not sessions or workshops) that participate in tutoring (4a), workshops (4a), and online classes (4b). Accordingly, the current target for performance measure 4a is set at 3/3 (100% of all Cohort 4 participants) and for performance measure 4b is 1/3 (33% of all Cohort 4 participants). We used the same logic to develop project targets on performance measures 4a and 4b for Cohort 5 (i.e., 11/15 or 75% of all Cohort 5 participants for 4a and 5/15 or 33% of all Cohort 5 participants for 4b). In terms of actual performance data, College of the Canyons reports that 18 total students participating in Cohort 4 and Cohort 5, or 18/18 (100%), have sought tutoring with a faculty or student tutor—related to measure 4a. At the cohort level, if we look at Cohort 4 (n=3) and Cohort 5 (n=15), we see that 3 (3/3 or 100%) Cohort 4 and 15 (15/15 or 100%) Cohort 5 students participated in tutoring. Given actual performance data for Cohort 4 and Cohort 5, performance measure 4a has been achieved during this period. Because of the financial situation for our AIMS^2 scholars it is difficult for them to enroll in university courses while they are still at College of the Canyons. Accordingly, for performance measure 4b, College of the Canyons reports that 2/3 (66%) students in Cohort 4 and 6/15 (40%) students in Cohort 5 enrolled in online courses during cohort participation—therefore this performance measure has been achieved.

Preliminary Findings of Glendale Community College
To document participation in tutoring (4a), academic workshops (4a), and online courses (4b), information was collected from an in-class online student survey. Fifteen (15) students participated in the survey (response rate = 88%). Eleven students (73%) participated in STEM-related tutoring sessions and all attended multiple tutoring sessions. Ten of these students (67%) also participated in STEM-facilitated academic workshops with 8 out of the 10 attending multiple workshops.
Five (5) students reported enrolling in an online course at any college or university. This is a big improvement over prior years as only one student enrolled in an online course the previous year. GCC has exceeded the targets for both performance measures (4a and 4b).

Description of Project Activities Related to the Objective
Specific project activities at College of the Canyons and Glendale Community College, respectively, are detailed below.

Project Activities at College of the Canyons
We produced a full drop-in tutorial schedule including math, engineering and physics with faculty tutors and student peer tutors available for our AIMS^2 scholars. During this performance period, we utilized this drop-in tutorial schedule for math, engineering, and physics. There are thirteen hours of engineering tutoring with faculty and student tutors, twenty one hours of physics tutoring with faculty and student tutors and fifty six hours of mathematics tutoring with both faculty and student tutors available for our AIMS^2 scholars. We will monitor our progress toward these goals by collecting data on scholar participation in peer tutoring sessions and academic workshop attendance. Because of the financial situation for our COC AIMS^2 scholars it is difficult for them to enroll in courses at CSUN while they are still at College of the Canyons.

Project Activities at Glendale Community College
Glendale Community College students are offered tutoring as well as STEM-facilitated academic workshops. The AIMS^2 Counselor/Coordinator reminds students of the tutoring support available and their requirement to seek tutoring services. 75% of students stated that tutoring was helpful. Comments from students regarding the tutoring were overwhelmingly positive:

"The tutor was knowledgeable and patient when tutoring me."

"He helps me organize the material."

"Improved test scores and understanding of material."

Plans to Use of Performance Data to Monitor Progress

At College of the Canyons, progress toward the above performance measures of this objective will continue to be tracked using a tracking mechanism. Meanwhile, Glendale Community College plans to monitor performance on these two measures using the online survey results.

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

5. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Increase and enhance student-faculty interaction at College of the Canyons and Glendale Community College with CSUN faculty in STEM fields

5.a. Performance Measure* for College of the Canyons**	Measure Type	Quantitative Data***					
Increase by 90 percent the frequency of student-faculty interactions over the 2010-11 baseline rate****	Project	Target			Actual Performance Data*****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
			3/3	100		3/3	100
			5/15	33		7/15	47

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**

5.a. Performance Measure* for Glendale Community College**	Measure Type	Quantitative Data***					
Increase by 90 percent the frequency of student-faculty interactions over the 2010-11 baseline rate ****	Project	Target			Actual Performance Data*****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
			3/15	20		5/15	33

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Numbers reported cannot be disaggregated per cohort and are combined for the two cohorts of students enrolled in 2015-16.**

5.b. Performance Measure* for College of the Canyons**	Measure Type	Quantitative Data					
Improve the quality of interactions between College of the Canyons and Glendale Community College students and CSUN faculty in STEM fields	Project	Target			Actual Performance Data***		
		Raw Number	Ratio	%	Raw Number	Ratio	%
			1/3	33		3/3	100
			5/15	33		2/15	13

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
***** Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**

5.b. Performance Measure* for Glendale Community Colleges**	Measure Type	Quantitative Data					
Improve the quality of interactions between College of the Canyons and Glendale Community College students and CSUN faculty in STEM fields	Project	Target			Actual Performance Data		
		Raw Number	Ratio	%	Raw Number	Ratio	%
			/			/	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective
College of the Canyons and Glendale Community College report their respective data sources and methods below.

Evaluation Data Sources and Methods at College of the Canyons
COC used a survey questionnaire to establish the baseline data regarding faculty contact. During the course of this performance period, all COC faculty contacts were recorded. Interactions with CSUN faculty and students through summer research opportunities were are also recorded.

Evaluation Data Sources and Methods at Glendale Community College
Glendale Community College used an online student survey and information gathered from student focus groups to collect data on student-faculty interactions. The quality of interactions was not documented because there were no reported interactions during the school year.

Description of Preliminary Findings Related to the Objective
Preliminary findings for each college are reported below.

Preliminary Findings of College of the Canyons
For performance measure 5a, College of the Canyons is working to strengthen its schedule of appointments for our engineering faculty to spend one-on-one time with each member of our AIMS^2 student cohorts as well as provide professional development workshops related to math anxiety, financial aid, and summer research experience. Each student will be scheduled for monthly one-on-one time with faculty in the engineering department to discuss their academic goals, their professional aspirations, and the barriers they may face along the way. During this reporting period, 76 faculty-student interactions in Cohorts 4 and 5 were made. When we examine the total number of interactions by student headcount, we find that 3/3 (Cohort 4) and 7/15 (Cohort 5) students interacted with faculty. We recorded students scheduling

one-on-one meetings with faculty in the engineering department to discuss their academic goals, professional aspirations, and barriers to academic success; we also made note of those students who attended at least one of our workshops. Given baseline data for Cohort 4 (n=0)—and the same model applied to Cohort 5 (n=0)—for performance measure 5a, we see that actual performance data allows us to conclude that this performance measure has been achieved.

In terms of performance measure 5b, during the summer of 2016, 3/3 Cohort 4 and 2/15 Cohort 5 students were involved with hands-on research with CSUN faculty and students as well as GCC, Mission, Moorpark, and Pierce students. The research lasted for a period of 8-10 weeks. Overall, the quality of interactions between students and faculty improved for all participants of Cohort 4 (n=3/3) and Cohort 5 (n=2/15), thus achieving this performance measure for the current period for Cohort 4, but not achieving this performance measure for Cohort 5.

Preliminary Findings of Glendale Community College
Five (5) out of 15 (33%) Glendale Community College AIMS^2 students reported that they interacted with a faculty member who provided them with career support and academic expertise. Interactions included: office hour visits (3 students), email communication (2 students), communication by phone (1 student), and out-of-class discussions/meetings (3 students). Given actual performance data, performance measure 5a has been achieved during this period.

For performance measure 5b (quality of student-CSUN faculty interactions), the AIMS^2 participants did not have access to CSUN faculty during the school year. There were summer research opportunities that some students participated in, but their participation was not captured on the survey administered at the end of the academic year.

<u>Description of Project Activities Related to the Objective</u>
Specific project activities at College of the Canyons and Glendale Community College, respectively, are detailed below.

Project Activities at College of the Canyons
At College of the Canyons, each student will be scheduled for monthly one-on-one time with faculty in the engineering department to discuss their academic goals, their professional aspirations, and the barriers they may face along the way. This chance to interact informally with CSUN faculty and learn about their research will provide a unique experience for College of the Canyons AIMS^2 students. We will track the number of faculty/scholar appointments and scholar participation in CSUN faculty events at COC.

Project Activities at Glendale Community College
Opportunities to interact with GCC and CSUN faculty were provided to AIMS^2 students. Guest speakers, as well as faculty from GCC and CSUN, attended the club's monthly sessions and shared information with participants on a range of STEM issues and disciplines. This past year, we were lucky to have the speakers and networking opportunities for our students such as: Heidi Arriola (Envirogen Sales Engineer), Frank Barragan (Founder of Adlincio, Inc), and Brian Vasquez (East Los Angeles College Engineering Professor).

Summer Project Research Activities at CSUN
In addition to the project activities included above under College of the Canyons and Glendale Community College, CSUN faculty mentors facilitated interaction between themselves and COC and GCC students, as well as students from three other community colleges during the performance period. Specifically, select CSUN faculty mentors invited COC, GCC, Los Angeles Mission College (Mission), Los Angeles Pierce College (Pierce),and/or Moorpark Community College (Moorpark) students to join CSUN students in faculty research projects at CSUN with CSUN faculty mentors in Summer 2016. The CSUN faculty mentors, research project names, and number of students (COC, GCC, Mission, Moorpark, Pierce, and CSUN) who participated in the projects are listed below:

Professors Behzad Bavarian and Lisa Reiner:
"Application of Aluminum Alloys for Aircraft Applications," "Corrosion Protection of Steel Pipes/Concrete Structures Using Corrosion Inhibitors," and "Rechargeable Metal-Ion Batteries for Energy Storage" with 1 COC student, 1 GCC student, 1 Mission student, and 2 Moorpark students.

Professor Bruno Osorno:

"Electric Speed Drives Technology in Transportation (ESDTT)" with 2 GCC students and 2 CSUN students.

Professor Vidya Nandikolla:
"Stem Integrated Robotics: Drone," "Robotics for Elementary," and "Biomedical Modeling" with 1 COC student, 2 GCC students, 3 Pierce students, 4 Moorpark students, and 1 CSUN student.

Professor Anwar Alroomi:
"Cost Estimating Model of Construction of Marine Outfalls" with 2 CSUN students.

Professor Vibhav Durgesh:
"Flow Visualization Experiments on NACA0021 Airfoil at Low Re Numbers" with 2 GCC students, 1 Mission student, and 2 Moorpark students.

Professors Tadeh Zirakian and David Boyajian:
"Developing a Structural Engineering Encounter (SEE) Active-Learning Laboratory Environment" with 1 Mission student and 1 Pierce student.

Professor Vahab Pournaghshband:
"Detection of Network Traffic Interference by Intermediaries on the Internet" with 1 GCC student and 1 Pierce student.

Professor Ruting Jia:
"Solving Real World Problems by Using Intelligent Control Techniques" with 2 COC students 1 Mission student. and 1 Moorpark student.

Professor S. Jimmy Gandhi:
"Creation of an Entrepreneurial Mindset Among Undergraduate Students" with 1 CSUN student.

In terms of the performance measures of this objective, these projects facilitated interaction between CSUN faculty, CSUN students, and COC/GCC students within a research context and supported the achievement of the objective.

<u>Plans to Use of Performance Data to Monitor Progress</u>
At College of the Canyons, progress toward the performance measures of this objective is tracked using a survey, faculty/scholar appointment records, records of counseling contacts and scholar participation in COC and CSUN events and research opportunities. Glendale Community College will continue monitoring performance on these two measures through the use of results from the online survey and group interviews (i.e., participant focus groups). Specifically, Glendale Community College plans to collect data on the quality of student-faculty interactions in 2016-17 through student participant focus groups and a follow-up online survey. For the student focus groups, a protocol will be used to inquire about students' experiences in interacting with CSUN faculty, the frequency of interactions, the types of interactions, and what was most and least beneficial about the support they received. The focus groups will be led by the program evaluators and will be audio recorded as well as have handwritten notes taken during the discussion.

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

6. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Enhance the peer environment of College of the Canyons and Glendale Community College students in STEM fields

6.a. Performance Measure* for College of the Canyons**	Measure Type	Quantitative Data***					
		Target			Actual Performance Data*****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by15 the number of College of the Canyons and Glendale Community College students who participate in peer-peer tutoring sessions over the 2010-11 baseline number****	Project	3	/		3	/	
		15			15	/	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
*******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**

6.a. Performance Measure* for Glendale Community College**	Measure Type	Quantitative Data***					
		Target			Actual Performance Data*****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by15 the number of College of the Canyons and Glendale Community College students who participate in peer-peer tutoring sessions over the 2010-11 baseline number****	Project	15			5		

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Numbers reported cannot be disaggregated per cohort and are combined for the two cohorts of students enrolled in 2015-16**

6.b. Performance Measure* for College of the Canyons**	Measure Type	Quantitative Data***					
Increase by15 the number of College of the Canyons and Glendale Community College students who are peer mentored by CSUN students over the 2010-11 baseline number****	**Project**	**Target**			**Actual Performance Data*****		
		Raw Number	**Ratio**	**%**	**Raw Number**	**Ratio**	**%**
		3	**/**		**0**	**/**	
		15			**2**		

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
*******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**

6.b. Performance Measure* for Glendale Community College**	Measure Type	Quantitative Data**					
Increase by15 the number of College of the Canyons and Glendale Community College students who are peer mentored by CSUN students over the 2010-11 baseline number****	**Project**	**Target**			**Actual Performance Data*****		
		Raw Number	**Ratio**	**%**	**Raw Number**	**Ratio**	**%**
		15			**0**		

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
*****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
******Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
*******Numbers reported cannot be disaggregated per cohort and are combined for the two cohorts of students enrolled in 2015-16**

6.c. Performance Measure* for College of the Canyons**	Measure Type	Quantitative Data					
Improve the quality of peer-peer interaction	**Project**	**Target**			**Actual Performance Data***		
		Raw Number	**Ratio**	**%**	**Raw Number**	**Ratio**	**%**
			3/3	**100**		**3/3**	**100**
			15/15	**100**		**15/15**	**100**

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**
***** Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**

6.c. Performance Measure* for Glendale Community College**	Measure Type	Quantitative Data					
Improve the quality of peer-peer interaction	**Project**	**Target**			**Actual Performance Data**		
		Raw Number	**Ratio**	**%**	**Raw Number**	**Ratio**	**%**
			/			/	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that this performance measure is reported in separate tables for College of the Canyons and Glendale Community College.**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective

During the performance period, College of the Canyons and Glendale Community College supported the evaluation of these measures through data collection methods designed to meet their unique project needs.

Evaluation Data Sources and Methods at College of the Canyons

College of the Canyons collected data on student participation in tutoring sessions, AIMS^2 activities and the tutor/mentor training workshop through existing tracking and recording mechanisms.

Evaluation Data Sources and Methods at Glendale Community College

Glendale Community College used an online survey questionnaire and focus groups to collect data on these performance measures.

Description of Preliminary Findings Related to the Objective

Preliminary findings for each college are reported below.

Preliminary Findings of College of the Canyons

During this performance period, a total of 140 hours in STEM tutoring in biology, chemistry, engineering, physics, and mathematics were provided by both faculty and student tutors. On average each week there were twenty one hours of tutoring in chemistry, physics, and mathematics. In addition to one-on-one tutoring, there were 6 AEW workshops each week in chemistry, physics and math. Attendance at these workshops was as follows:

Chem 201 (General Chemistry I): 14 student participants/2 AIMS^2 scholars
Chem 202 (General Chemistry II): 9 student participants/1 AIMS^2 scholar
Math 211 (Calculus I): 8 student participants/2 AIMS2^2 scholar
Math 212 (Calculus II): 15 student participants/7 AIMS^2 scholar
Math 213 (Calculus III): 11 student participants/4 AIMS^2 scholars
Physics 221 (Electricity & Magnetism): 14 student participants/5 AIMS^2 scholar

During the performance period, 3 of the 3 students in Cohort 4 and 15 of the students in Cohort 5 participated in tutoring or academic workshops (see performance measure 4a). Given project targets, we can conclude that, project respective targets for both cohorts have been met this performance period. In terms of peer mentoring (performance measure 6b), College of the Canyons reports that no Cohort 4 students participated in peer mentoring by CSUN students during the period, but in Cohort 5 students participated in peer mentoring by CSUN students during the period—so this performance measure has not been achieved for either cohort during the period, although there was some progress with Cohort 5. In terms of performance measure 6c, qualitative data on the quality of peer (student-student) interaction was recorded.

Preliminary Findings of Glendale Community College

For performance measure 6a (participation in peer-peer tutoring), all Glendale Community College students are encouraged to participate in tutoring to increase their math, science and language skills. Only five (5) out of 15 students reported participating in peer-peer tutoring in 2015-16. The subject that students requested the most tutoring in was mathematics, followed by science.

With respect to performance measure 6b (peer mentored by CSUN students), at the time the students were surveyed, no (0) students reported having a peer mentor from CSUN. This was clearly a challenge during the academic year and there needs to be more concerted effort between the CSUN AIMS staff and GCC coordinator/counselors to engage in more planning.

For performance measure 6c (quality of peer interactions), survey and focus groups responses revealed a large majority of positive student comments on the strength and quality of the relationships built though the program. The following are selected examples:

"I loved interacting with people who are just like me, trying to become an engineer. Watching them succeed allowed me to take similar steps to allow myself to have a better chance at becoming a success in STEM."

"I really enjoy being part of this group because my previous educational experience I was surrounded by people who did not have a desire to push themselves harder…being surrounded by these individuals who are constantly pushing themselves inspired me to push myself even further and even harder because I enjoy always striving to go beyond my limits, and it's nice to be surrounded by people who have the same drive and motivation that I have."

"I liked the support and encouragement of faculty and other peers."

<u>Description of Project Activities Related to the Objective</u>

College of the Canyons and Glendale Community College, respectively, report specific project activities in detail both immediately above and below.

Project Activities at College of the Canyons

During this performance period, College of the Canyons established a drop-in tutorial schedule for math, engineering, and physics hosted by faculty and students. College of the Canyons project faculty and staff are currently developing additional training workshops for peer tutors and, as mentioned earlier, are developing a tracking mechanism for AIMS^2 scholars using peer tutors. With regard to this performance measures, COC's AIMS^2 scholars have participated in the following activities:

MESA STEM Week
Company tour to Mechanix Wear
3-D Printer Presentation
Various "lunch with alum" activities
Soldering workshop, pasta and marshmallow tower competition, paper tower competition

We will track all scholar interactions with peer mentors from both COC and CSUN. We are currently developing additional training workshops for peer tutors and as mentioned earlier have developed a tracking mechanism for AIMS^2 scholars using peer tutors.

Project Activities at Glendale Community College

Glendale Community College students are provided many opportunities for peer-peer interaction by way of club meetings, field trips, and club projects. Students meet monthly for one hour in a club capacity to work as a team to tackle real, tangible, and ambitious projects, as well as enhance their knowledge of STEM through guest speakers. Peer interactions are also encouraged and strengthened during field trips, networking events, conference attendance, and class projects. One that has the biggest turnout is the national Society of Hispanic Professional Engineers (SHPE) conference which took place in November 2015. Other big events in which students took part were the Hispanic Engineer National Achievement Awards Corporation (HENAAC) conference (October 2015), GCC Manufacturing Day (October 2015), Robotics Academy Maker Faire (February 2016), and the regional SHPE conference (April 2016).

Plans to Use of Performance Data to Monitor Progress

We plan to address the need for peer mentoring of College of the Canyons and Glendale Community College students by CSUN students.

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

7. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Increase the program completion of Hispanic and low-income students in STEM fields

7.a. Performance Measure*	Measure Type	Quantitative Data**					
		Target			Actual Performance Data		
		Raw Number	Ratio	%	Raw Number	Ratio	%
After two years, increase from 26 % to 30% the number of Hispanic and low-income students who complete baccalaureate degrees in STEM fields over the 2010-11 baseline number***	Project		21/68	30.9		49/156	31.4

***CSUN institutional data**
****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
*****Baseline data per Instructions for Grant Performance Report**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective

During the performance period, we collected actual performance data on the single performance measure for this objective. During the performance period of the first project year (2012-2013), we collected baseline data for the performance measure. Quantitative data sources for both baseline and actual performance data for this measure are from CSUN institutional data (from CSUN's Office of Institutional Research). During the performance periods for all five project years, we worked with CSUN's Office of Institutional Research to prepare the 2010-11 baseline data on student transfer figures for both College of the Canyons (COC) and Glendale Community College (GCC) and to produce the 2015-16 figures of actual performance data.

Description of Preliminary Findings Related to the Objective

The baseline data for this measure is from CSUN's Office of Institutional Research and includes institutional data (i.e., not project cohort data). Accordingly, the baseline data do not correspond to the number of project cohort participants but rather to all students who met the criteria for inclusion in the transfer cohort (see next sentence). The baseline data for Hispanic and/or low-income students in engineering and computer science at CSUN indicates that the three-year program completion (i.e., graduation) rate for the most recent entry term (Fall 2007) at project formation for Hispanic and/or low-income (i.e., Pell grant recipients) transfer students planning to major in a field in the College of Engineering and Computer Science was 26.5% (18/68). This program completion rate—26.5%--comprises the baseline data for the project and the basis for which the project target of 30% is set. Given the project target increase, the number of students who graduated is 21/68 (or just over 30%--30.9%). When we interpret actual performance data against the project target of 30.9% (21/68), we find that 31.4% (49/156) completed a degree program for the most recent period for which institutional data are available (entry term: Fall 2012). That is, of the 156 Hispanic and/or low-income transfer students planning to major in a field in the College of Engineering and Computer Science who entered in Fall 2012, 49 students completed a program of study within three years, for a total of 31.4% of all students in the entry cohort. What is more, this figure represents over a two percentage point increase over the Fall 2008 data (reported in the performance period for the first project year) of 29.3% (22/75) but a slight decrease from last project year's data (i.e., fourth project year) of 36.5% (n=72/197) from the Fall 2011 entry co-

hort. While this is a mixed pattern in terms of the percentage of students completing a degree program, we see a consistent improvement over the baseline in the overall number of students completing a program of study—from 18 in the 2010-11 period to 72 in last year's performance period to 49 in this year's performance period. Overall—given the project target—we can conclude that we have exceeded the baseline and target measure for the performance measure of this objective.

Description of Project Activities Related to the Objective

During the performance period, project faculty mentors and staff worked to support this project objective. For example, faculty mentors met with their cohort participants (largely in Cohort 4, Cohort 5, and Cohort 6 starting in Fall 2015, but in some cases also in Cohort 1, Cohort 2, and Cohort 3) to establish a faculty mentoring relationship and coordinate project activities with cohort participants, including cohort meetings and research project groups. Project activities currently under way and/or planned for the future include the following: participation in CSUN's Tech Fest and Senior Design Project Showcase, peer tutoring, participation in undergraduate research projects with faculty, projects or activities in an instructional lab of the faculty mentor, and introduction to an appropriate professional society student chapter in a discipline of the faculty mentor. In addition, project staff facilitated student participation in national organizations for Latino/a students, including ASHIE (Alliance of HSI Educators), SHPE (Society for Hispanic Professional Engineers), HACU (Hispanic Association of Colleges and Universities), and HENAAC (Hispanic Engineer National Achievement Awards Corporation).

Plans to Use of Performance Data to Monitor Progress

With both baseline and actual performance data for the performance measure of this objective, we plan to publish the figures from this year's report on the AIMS^2 project website (http://www.ecs.csun.edu/aims2/).

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

8. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Enhance the academic advising capacity in STEM fields at CSUN

8.a. Performance Measure*	Measure Type	Quantitative Data					
		Target			Actual Performance Data		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by one the number of academic advisors at CSUN in STEM fields over the 2010-11 baseline number	Project	4	/		4	/	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**

8.b. Performance Measure*	Measure Type	Quantitative Data****					
		Target*****			Actual Performance Data		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by two the number of advising/counseling sessions with students** in STEM fields over the 2010-11 baseline number***	Project	73			12		
		25			12		

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****CSUN cohort participants only**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**
*******Cohort 4 baseline data updated from Year4 to reflect non-matriculating students**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective

During the performance period, we collected baseline and actual performance data for these two measures through a combination of document data, student recruitment/application interviews (open-ended questionnaire), and student structured journal sources. Specifically, we collected actual performance data for both Cohorts 4 and 5 for the second project objective (8b) through document (structured journal) data collection in late Spring 2014, Fall 2014, Spring 2015, Fall 2015, Spring 2016, and early Fall 2016. Previously, during the performance period of the first project year, we collected baseline and actual performance data for the first objective (8a) through document data collection in Spring 2012. In addition, we collected baseline data for Cohorts 4 and 5 for the second objective (8b) in the CSUN student recruitment process/ questionnaire administration in the late Fall 2013/early Spring 2014 terms (Cohort 4) and questionnaire administration for Cohort 5 in late Summer 2014/early Fall 2014. During baseline data collection for both Cohorts 4 and 5, we asked cohort participant applicants the number of academic advising sessions that they had attended in the term immediately prior to the formation of the cohort in Spring 2014 (Cohort 4) or immediately prior to the formation of the cohort in Fall

2014 (Cohort 5). Finally, we collected Cohort 4 and Cohort 5 actual performance data during the period through structured journals data, which cohort participants completed on a monthly basis and submitted in the Moodle (online) project site. Student journaling occurs through student completion of an electronic journal form with items related to project outcomes, including an item related to the number of academic advising sessions for the month. That is, students complete and submit an electronic journal entry related to academic advising (and other project activities) by the end of the month or the beginning of the next month. Once submitted, journal entry data extracts in Excel occurred, followed by a tabulation of the aggregate number of counseling sessions.

Description of Preliminary Findings Related to the Objective

Preliminary Findings for Performance Measure 8a

With respect to the first performance measures (8a) for this objective, baseline data reveal that CSUN's College of Engineering and Computer Science had three full-time staff academic advisors in 2010-11. Given that the college had three staff academic advisors prior to the project, the project target is four total academic advisors. During the first project year (2012-13), we augmented the academic advising capacity of the college through the seven faculty mentors who offer academic advising to the cohort participants. Further, actual performance data for the first performance measure (8a) demonstrate that, during the first project performance period (2012-13), we met the project target and achieved this component of the project objective with the addition of one new staff academic advisor to the college. The current staff academic advisor, Stacey Schaaf, works with the student services office of the college and coordinates project activities related to cohort participant advising. With the addition of Stacey, the college now has four staff academic advisors in total, one above the baseline data. Given the actual performance data (n=4) and the project target (n=4), we have met this performance measure of the objective.

Overview of Preliminary Findings for Cohorts 4 and 5: Performance Measure 8b

When we turn to the second performance measure (8b) of this objective, we find baseline data collection for Cohorts 4 and 5 began with the CSUN student recruitment/applicant process in the early Spring 2014 term (Cohort 4) and early Fall 2014 term (Cohort 5). With recruitment questionnaires, we asked cohort participant applicants the number of academic advising sessions that they had received immediately prior to the formation of Cohort 4 in Spring 2014 or prior to the formation of Cohort 5 in Fall 2014.

Preliminary Findings for Cohort 4: Performance Measure 8b

The number of academic advising sessions that CSUN Cohort 4 participants reported prior to project entry is 23 (CSUN students only), which represents the baseline figure for this measure. Given the project target of increasing the number of academic advising sessions by two sessions per student, the current target number of sessions for Cohort 4 is 73. We derived this target by multiplying the number of unduplicated Cohort 4 participants at CSUN (n=28) by two (sessions per student) and adding 23 sessions to the total for a total of 73. Further, actual performance data for the second performance measure (8b)—collected through cohort participant journaling during the performance period—reveals that Cohort 4 participants reported 12 total academic advising sessions through the end of performance period. This figure (n=12) represents a decrease of 87 fewer advising sessions reported from the total number of academic advising sessions (n=99) for the performance period of the fourth project year and does not exceed the total project target (n=73) for the performance measure in the current performance period (i.e., fifth project year). We note that students in Cohort 4 did not have a high response rate in the monthly journal submissions. Furthermore, they may not have demonstrated a level of participation in academic advising because they were moving toward senior standing.

Preliminary Findings for Cohort 5: Performance Measure 8b

Meanwhile, the number of academic advising sessions that CSUN Cohort 5 participants reported prior to project entry is 7 (CSUN students only), which represents the baseline figure for this measure. Given the project target of increasing the number of academic advising sessions by two sessions per student (n=9), the current target number of sessions for Cohort 5 is 25. We derived this target by multiplying the number of unduplicated Cohort 5 participants at CSUN (n=9) by two (sessions per student) and adding 7 sessions to the total for a total of 25. By contrast, actual performance data for the second performance measure (8b) shows that Cohort 5 participants reported 12 total academic advising sessions through the end of performance period. The figure (n=12) for this performance period does not exceed the project target of 25 total academic advising sessions.

Description of Project Activities Related to the Objective

Current and planned project activities that support the two performance measures for this objective include faculty mentoring through cohort and individual student meetings, career advising through cohort meetings with faculty mentors, academic advising in the student services center, and academic workshops. In addition, more informal advising occurs at events like AIMS^2 orientations—which occurred on 2/21/14 for Cohort 4 and 9/19/14 for Cohort 5—and AIMS^2 workshops (which occurred

on 2/12/14 in the past performance period). To support academic and career advising, we disseminate information through posts of upcoming workshops, internships, and events on our project's website (http://www.ecs.csun.edu/aims2/). In addition, with the distribution of iPads to all cohort participants (in Cohorts 1, 2, 3, 4, and 5), we hope to support student access to academic and career advising tools available online and via email exchanges with project faculty and staff and apps.

Plans to Use of Performance Data to Monitor Progress

With actual performance measure data for both measures in this project objective for this period, we have reported baseline and actual performance measure in this report.

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

9. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Enhance the academic participation rate of CSUN students in STEM classes, particularly in classes identified as barriers to retention, persistence, and completion in STEM fields

9.a. Performance Measure*	Measure Type	Quantitative Data**					
Increase by 75 percent the students who participate in tutoring sessions in STEM classes (identified as barriers) over the 2010-11 baseline rate***	Project	Target*****			Actual Performance Data****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
			18/25	72		2/25	8
			9/9	100		1/9	11

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**
*******Cohort 4 baseline data updated from Year4 to reflect non-matriculating students**

9.b. Performance Measure*	Measure Type	Quantitative Data**					
Increase by 75 percent the students who participate in STEM academic workshops over the 2010-11 baseline rate***	Project	Target*****			Actual Performance Data****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
			9/25	36		2/25	8
			9/9	100		4/9	44

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**
*******Cohort 4 baseline data updated from Year4 to reflect non-matriculating students**

9.c. Performance Measure*	Measure Type	Quantitative Data**					
		Target*****			Actual Performance Data****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by 75 percent the students who participate in supplemental labs sessions with CSUN faculty over the 2010-11 baseline rate***	**Project**		**5/25**	**20**		**2/25**	**8**
			4/9	**44**		**3/9**	**33**

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**
*******Cohort 4 baseline data updated from Year4 to reflect non-matriculating students**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective

With respect to baseline data for these three performance measures of this objective, data collection began with the Cohort 4 and Cohort 5 student recruitment cycles in early Spring 2014 (Cohort 4) and early Fall 2014 (Cohort 5). During the interview and/or questionnaire administration process, we asked cohort applicants for Cohorts 4 and 5 the number of tutoring sessions, academic workshops, and supplemental lab sessions in which they had participated prior to program entry.

Description of Preliminary Findings Related to the Objective

Preliminary Findings for Cohort 4: Performance Measures 9a, 9b, and 9c

During the performance period, baseline data for the three performance measures of this objective reveal that 10 students reported having participated in tutoring sessions in Cohort 4, while a total of 5 students reported having participated in an academic workshop prior to program entry. Furthermore, 3 students from Cohort 4 had reported participating in supplemental lab sessions prior to project entry (i.e., in Spring 2014) during the baseline data collection process. These three figures relate to the number of students (i.e., headcount) rather than sessions or workshops. Accordingly, these three figures represent Cohort 4 baseline data for these three measures. Given the baseline data, the Cohort 4 project targets—all of which represent a 75% increase—for the three measures include 18 students (9a), 9 students (9b), and 5 students (9c). In contrast, actual performance data for the three measures for Cohort 4, collected through monthly structured journaling, reveal that 2 students reported participating in tutoring sessions (performance measure 9a). As a performance measure that requires us to collect headcount data rather than frequency data, these data represent 8% (2/25) of all Cohort 4 participants. The actual performance data for this performance measure indicate that the number of students who participated in tutoring (n=2) did not exceed the project target (n=18). When we examine tutoring participation in both Cohorts 4 and 5 by major, we find that students across several majors participated in tutoring. As we see in the table below, civil engineering and construction management (n=1), computer science (n=1), and manufacturing systems engineering (n=1) each recorded a student by headcount who participated in tutoring. Finally, while more students from Cohort 4 participated in tutoring (2 in Cohort 4 vs. 1 in Cohort 5), a greater percentage of Cohort 5 students (11% in Cohort 5 vs. 8% in Cohort 4) engaged in peer tutoring during the performance period.

Peer Tutoring Participation by Major and Cohort, AIMS^2 Cohort Participants, Cohorts 4 and 5, October 2015-September 2016

Major / ***Cohort***	*Civil Engineering and Construction Management*	*Computer Science*	*Computer Information Systems*	*Electrical Engineering*	*Manufacturing Systems Engineering*	*Mechanical Engineering*	**TOTAL**
Cohort 4	1	1	0	0	0	0	**2**
Cohort 5	0	0	0	0	1	0	**1**
TOTAL	**1**	**1**	**0**	**0**	**1**	**0**	**3**

With respect to performance measure 9b, 2 students from Cohort 4 reported participating in academic workshops through the period, which represents 8% (2/25) of Cohort 4 participants and indicates that actual performance data (n=2) did not exceed the project target (n=9). Finally, with respect to performance measure 9c, 2 students (Cohort 4) reported participating in a supplemental lab. Accordingly, actual data indicate that performance in this area of the objective (i.e., 8% of all Cohort 4 participants) fell just short of the project target (n=5). Taken together, actual performance data on these three measures demonstrate substantive progress toward meeting (but not actually meeting) this project objective related to increasing student participation by 75% in tutoring, academic workshops, and supplemental labs for Cohort 4. We note that students in Cohort 4 did not have a high response rate in the monthly journal submissions. Furthermore, they may not have demonstrated a level of participation in the three activities that relate to this object sufficient to meet or exceed the target because they were moving toward senior standing.

Preliminary Findings for Cohort 5: Performance Measures 9a, 9b, and 9c

Similarly, baseline data for the three performance measures of this objective during the performance period reveal that the number of Cohort 5 students who reported—prior to program entry—having participated in tutoring sessions is 6, the total number of Cohort 5 students who reported having participated in an academic workshop is 5, and the total number of Cohort 5 students who reported participating in supplemental lab sessions is 2. These three figures relate to the actual number of Cohort 5 students (i.e., headcount) rather than sessions or workshops. As such, these three figures represent Cohort 5 baseline data for these three measures, respectively. With these baseline data, the project targets—all of which represent a 75% increase—for Cohort 5 for the three measures are 9 students (9a), 9 students (9b), and 4 students (9c). When we turn to actual performance data for Cohort 5 on the three measures, we discover that 1 student reported participating in tutoring sessions (performance measure 9a). As a headcount measure, this figure represents 11% (1/9) of all Cohort 5 participants. That is, actual data for this performance measure indicate that the number of students who participated in tutoring (n=1) did not exceed the target (n=9). For performance measure 9b, 4 students reported participating in academic workshops through the period, which represents 44% (4/9) of Cohort 5 participants and suggests that the number of students who participated in academic workshops (n=4) was maintained in relation to the baseline (n=5). Finally, with respect to performance measure 9c, 3 students reported participating in a supplemental lab, which points to actual data (i.e., 33% of all Cohort 5 participants) that demonstrates progress on this project performance measure (9c) during the period. Taken together, actual performance data on these three measures demonstrate continued progress toward meeting (but not meeting) these project objectives related to increasing student participation in three key academic activities: tutoring, academic workshops, and supplemental labs.

Description of Project Activities Related to the Objective

With respect to the first performance measure (9a), with the formation Cohort 4 in January 2014 and Cohort 5 in August 2014, we have continued to recruit, hire, train, and assign classes to peer tutors from CSUN to work with cohort participants. In addition, we developed a model to recruit, hire, train, and assign peer tutors within faculty mentor groups to facilitate closer ties between faculty mentors, peer tutors, and cohort participants. As part of the process, project faculty and staff coordinated a process to advertise, recruit, hire, and train peer tutors from CSUN's upper-division undergraduate and graduate students in the College of Engineering and Computer Science at the department or discipline level—within the respective faculty mentor groups. Similarly, faculty mentors have continued to work with project staff to identify the "bottleneck" and/or "gateway" courses where tutoring may be needed for cohort participants. Also as part of the process, we produced a complete tutoring list with names and contact information of tutors to distribute and disseminate to cohort participants (see: http://www.ecs.csun.edu/aims2/peer_tutors.html). With these strategies, we seemed to have supported cohort participant use of tutoring/peer tutoring. In addition to these activities related to tutoring (i.e., performance measure 9a), the second performance measure (9b) guides our work with workshops, where we post and disseminate information on upcoming workshops on our project's website (http://www.ecs.csun.edu/aims2/). Finally, faculty mentors have maintained small group sessions with cohort participants in their instructional labs (to support performance measure 9c). To support student participation in supplemental labs (performance measure 9c), we adopted technology resources during the first three years of the project. Over the second, third, fourth, and fifth years of the project, we added Apple tablets to the cohort experience with dissemination of iPads to students and faculty in the project to support workshops and supplemental lab participation.

Plans to Use of Performance Data to Monitor Progress

Data collection to measure actual performance on these three performance measures for this objective consists of survey data collection (e.g., cohort journaling), which occurs through student completion of an electronic journal form with items related to project outcomes. Specifically, we ask students to indicate the number of sessions or workshops that they attended in the past month, including the number of supplemental lab sessions, the number of academic advising sessions, and the number of academic workshops. As part of the journaling process, students complete and submit an electronic journal entry by the end of every month. Once submitted, data extracts in Excel occur, after which a tabulation of the aggregate numbers are performed.

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

10. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Enhance the research participation rate of CSUN students in STEM fields

10.a. Performance Measure*	Measure Type	Quantitative Data**					
Increase by 50 percent CSUN students who participate in research-related activities with faculty in STEM fields ***	Project	Target*****			Actual Performance Data****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
			3/25	12		5/25	20
			5/9	56		4/9	44

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**
*******Cohort 4 baseline data updated from Year4 to reflect non-matriculating students**

10.b. Performance Measure*	Measure Type	Quantitative Data					
Improve the research interests/skills of CSUN students in STEM fields**	Project	Target			Actual Performance Data		
		Raw Number	Ratio	%	Raw Number	Ratio	%
			/			/	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective

Quantitative Data Sources and Data Collection Procedures for Performance Measure 10a

For Cohort 4 and Cohort 5 baseline data collection for this performance measure (10a) occurred via cohort questionnaire administration. During the baseline data collection process for both cohorts, we asked cohort applicants for the number of faculty research-related sessions that they had in the Fall 2013 term/session (prior to pro-

gram entry for Cohort 4) and Spring/Summer 2014 term (prior to program entry for Cohort 5). We found that less than ten percent of Cohort 4 students (n=2) had participated in a faculty research session prior to entry into the project, while one third of Cohort 5 students (n=3) had participated in faculty research. Given the Cohorts 4 and 5 project target for the first performance measure was an increase of over 50% of the baseline figure, the actual project target for Cohort 4 is 3/25 and for Cohort 5 is 5/9. Data collection to measure actual performance on these two performance measures consists of a combination of document data and survey/questionnaire data collection (e.g., structured journaling), which occurs through student completion of a web-based journal form with items related to project objectives. Specifically, we included items to assess performance on measure 10a of this objective where we ask students to indicate the number of faculty research sessions that they attended in the past month. Once submitted, we extracted data from journal entries into Excel, after which we tabulated the aggregate number of research-related sessions with faculty.

Interview Data Sources and Sample for Performance Measure 10b

In evaluating performance measure 10b, we analyzed a subsample of 24 interviews, all of which were conducted during Summer 2014 and early Fall 2014. Participants from the total sample were selected using a mixed sampling strategy of criterion and stratified purposeful sampling. Specifically, we used a criterion sample to select participants who met specific criteria for inclusion in the AIMS^2 program. These criteria include: a declared STEM major enrolled full-time in a CECS program; inclusion in a group that is economically, educationally, and environmentally disadvantaged or identification as Hispanic; and student transfer status. Additional criteria for inclusion in the interviews match AIMS^2 participation requirements, including the following: (a) pass all courses enrolled in each semester, (b) continue to be a declared STEM major, (c) enroll in a minimum of 12 units each semester, (d) earn a grade of "C+" or better in each class enrolled, and (e) participate in components of the program. In addition to the criterion strategy described above, we used stratified purposeful sampling in order to achieve a diverse sample. As such, we solicited interview participation from Cohorts 1, 2, 3 and 4 in Summer 2014 with a stratification based on gender, ethnicity, and program major. That is, we reviewed the full roster of AIMS^2 students in all cohorts and purposefully attempted to build a sample of students in specific strata. The goal of this sampling strategy was to create diverse groups by major, gender, and ethnicity. The sample of 24 interviews used to evaluate performance measure 10b reflects this diversity of the cohorts. With respect of student demographic characteristics, 19 interviewees identified as men and 5 as women, while 13 interviewees identified as Hispanic or Latino, 4 as Middle Eastern, 4 as White, 1 as Asian or Asian American, 1 as other, and 1 declined to state. As far as majors in engineering and computer science fields, 8 interviewees reported their major as mechanical engineering: 7 as computer science and computer information technology, 5 as electrical and computer engineering, 3 as civil engineering and construction management, and 1 as manufacturing systems engineering.

Interview Data Collection Instruments and Procedures for Performance Measure 10b

The primary instrument that we used to collect data from the 24 participants was an interview protocol. Overall, the interview protocol served to gather information from cohort participants related to validation and college-going capital in domains of family background, peer-peer interaction, student-faculty interaction, and academic and career preparation. For example, we asked the participants to respond to the following questions: What did you expect CSUN to be like when you first got here? Do you feel like you had the right experiences in your upbringing to prepare yourself for college? Do you feel like you need to have a certain background to be in your major? Have there been any situations where someone has taken an active interest in you, or thought you were capable of doing something, to get you more involved in your education? Using the interview protocol, we conducted one-on-one, 60-minute personal interviews with students from Cohorts 1, 2, 3, and 4, whom we invited to participate in the interviews through email. Once we received their response, we set times and dates for the interviews when both the particular student and one of the researchers could meet. The Dean's office arranged a secure, quiet room available for the interviews, which we conducted during Summer/early Fall 2014. To maintain and store confidential interview information, we assigned each cohort participant a three-digit random number. During the interview session, we shared an informed consent form with participants and audio recorded the session. Upon completion of the interviews, we transcribed the audio files into a de-identified data file. The recorded audio files were subsequently destroyed. We stored the transcribed files on a password-protected, secure laptop

Interview Data Analysis Procedures for Performance Measure 10b

After transcription, we proceeded with coding and thematic data analysis using ATLAS.ti, a computer-aided qualitative data analysis software program. Specifically, we used the themes that emerged from the ATLAS.ti analysis and from codes developed in hard copy transcribed data files. We then categorized the themes that emerged from codes that we clustered according to experiences and interactions of the cohort participants. These categories were used to align thematic findings to the performance measures associated with program objectives. Finally, we extracted direct quotes taken from the interviewees to illustrate themes and support overall findings.

Description of Preliminary Findings Related to the Objective

With student journaling in Cohorts 4 and 5 and student interviews with Cohorts 1, 2, 3, and 4, we report actual performance data for both measures for the fifth project year. In addition to the procedures described above, student interviews are used here to assess the second performance measure (10b). For this performance period, we used these two procedures to support a mixed-methods approach with the collection of both quantitative and qualitative data.

Preliminary Findings for Cohorts 4 and 5: Performance Measure 10a

For Cohort 4, actual performance data for this first measure indicate that we have achieved this part of this objective. In fact, during the current performance period, 5 participants from Cohort 4 reported engagement in faculty research, which represents 20% (5/25) of Cohort 4. From Cohort 5 participants, 4 students reported involvement in faculty research, a figure which represents 44% (4/9) of all Cohort 5 participants. As a result, actual performance data related to this performance measure (10a) of this objective demonstrate that we have exceeded the target (n=3) for Cohort 4 and maintained sustained progress toward the project target (n=5) for Cohort 5. We suspect that the reason that we did not meet the project target for Cohort 5 during this performance period relates to the status of Cohort 5 students as AIMS^2 cohort participants at Glendale Community College and College of the Canyons, where they had opportunities to participate in faculty research with their respective college faculty and CSUN faculty mentors.

Preliminary Findings for Cohorts 4 and 5: Performance Measure 10b

Over the past year, AIMS^2 students have participated in a variety of faculty research projects. In evaluating the second performance measure (10b), which relates to the improvement of research skills and interests, we learned that participants had worked on rechargeable metal-ion batteries, camera drones, web portal applications, construction cost estimating, elementary level STEM classroom activities, cultivating an entrepreneurial mindset, and robotics. For these students, research experiences have facilitated overall beneficial interaction with faculty. Indeed, a student who participated in a research project said, "Once I'm done with this project, I feel like I'll be able to keep approaching [redacted} future projects here." Additionally, research experience has supported the application of knowledge relevant to students' majors. On this point, one student stated, "Originally I didn't know anything about it so it was good experience. I'm glad I learned something." Another student found that, "It was a very valuable experience for me to work on this [research project] in the summer, and I'm looking forward to continuing this research for my senior project." And another student added, "I was able to learn the basics and apply it and put it all together." For more information related to student and faculty research, please see the "Student Accomplishments" section of the project website that is updated regularly with information on accomplishments: http://www.ecs.csun.edu/aims2/student_accomplishments.html.

Although most of the interviewees had participated in research and indicated beneficial experiences, some participants detailed issues concerning being accepted for research positions as well as the practice of the research itself. Specifically, two of the students we spoke to had not conducted any research. Referring to their work obligations, one participant stated, "I didn't have time to do any activities at the school. So the research is ten hours a week and I appreciate the offer and the opportunity. But this time, I can't do it." Students also expressed how grades could preclude them from research experience. This same student continued: "I was kind of limited because my GPA had dropped since I had gone back to work and wasn't able to maintain those grades as much as I would have wanted to."

Despite what these few students reported, the overall sentiment that emerged from the interviews pointed toward appreciation on the part of students who participated in faculty research. Cohort participants illustrated how research within the AIMS^2 program engendered valuable exposure to the field, application to their classes, and career opportunities. One participant shared, "This summer I'm working on the [redacted] with Dr. [redacted] so it's different research. I'm doing it as my senior design project." While another student said: "So I did research there and [redacted} always say, 'You're a perfect student for this or this. This [internship] is looking for these kinds of qualities.' …hopefully this semester I'll do more research with [redacted]." One other student believed that being involved in research has given her pause to think about future career paths. For example, she was not interested in coding, but after being involved in a research project she is now learning more coding languages. Others commented on the laboratories and equipment available. One student explained, "Joining AIMS allowed me the opportunity to be introduced to this laboratory that I didn't even know existed."And another said, "With the [redacted], we can actually save our data because [redacted] so it's a cool thing. I like it. And the other equipment is very modern. Whatever we ask [for], we can get it at the main equipment lab." Furthermore, working closely with AIMS^2 faculty members in a research capacity seemed to allow students to demonstrate their aptitude in the field. Such an environment creates opportunities for validation. To this point, one student reflected: "[Redacted] said, 'I would take you into my company.'" Similarly, interviewees recognize the influence that research experience has in the job market. As one student shared, "I figure if I put down working on a [redacted] [it] is pretty impressive." Importantly, the students also value the research prospects the program affords them, as indicated by the following statement: "If I wasn't in AIMS, I wouldn't have done the [reacted] project."

When faculty mentors shared their observations of student participation in summer research, they described an overall positive effect. For example, one faculty mentor stated: "We have made strong efforts to maintain the student research projects. It takes persistence to get students to commit to a schedule and consistently show up on time. It takes further effort to motivate them to do research that will result in fruitful outcomes." Another faculty mentor shared: "Students gained hands on experience with projects beyond their course work, which helped them to understand that the course work are important for research purposes. Student's commented that this is an amazing program helping with their academics as well as giving them an opportunity of research."

Description of Project Activities Related to the Objective

During the current performance period, faculty mentors worked to develop research-related activities with Cohort 4, Cohort 5, and Cohort 6 participants. In addition to the CSUN cohort students, faculty mentors also invited students from COC, GCC, Los Angeles Mission College (Mission), Los Angeles Pierce College (Pierce), and/or Moorpark Community College (Moorpark) to join in planned activities. Current and/or planned activities that faculty mentors considered for Cohort 4, Cohort 5, and Cohort 6 participants, as well as those students invited from surrounding community colleges, include projects in one of their instructional labs and/or research labs, and participation in related student professional events, networking, and competitions (please see "Description of Project Activities Related to the Objective" for objectives 1 and 7 for more details). Further, faculty mentors facilitated research project group coordination and meetings (including the recruitment of cohort participants for summer research) as part of their faculty mentor sessions with cohort participants. With information from the AIMS^2 website, project staff, and faculty mentors, we can report the following Summer 2016 research projects with faculty mentors:

Professors Behzad Bavarian and Lisa Reiner:
"Application of Aluminum Alloys for Aircraft Applications," "Corrosion Protection of Steel Pipes/Concrete Structures Using Corrosion Inhibitors," and "Rechargeable Metal-Ion Batteries for Energy Storage" with 1 COC student, students, 1 GCC student, 1 Mission student, and .2 Moorpark students.

Professor Bruno Osorno:
"Electric Speed Drives Technology in Transportation (ESDTT)" with 2 CSUN students and 2 GCC students.

Professor Vidya Nandikolla:
"Stem Integrated Robotics: Drone," "Robotics for Elementary," and "Biomedical Modeling" with 1 CSUN student, 1 COC student, 2 GCC students, 3 Pierce students, and 4 Moorpark students.

Professor Anwar Alroomi:
"Cost Estimating Model of Construction of Marine Outfalls" with 2 CSUN students.

Professor Vibhav Durgesh:
"Flow Visualization Experiments on NACA0021 Airfoil at Low Re Numbers" with 2 GCC students, 1 Mission student, and 2 Moorpark students.

Professors Tadeh Zirakian and David Boyajian:
"Developing a Structural Engineering Encounter (SEE) Active-Learning Laboratory Environment" with 1 Mission student and 1 Pierce student.

Professor Vahab Pournaghshband:
"Detection of Network Traffic Interference by Intermediaries on the Internet" with 1 GCC student and 1 Pierce student.

Professor Ruting Jia:
"Solving Real World Problems by Using Intelligent Control Techniques" with 2 COC students, 1 Mission student. and 1 Moorpark student.

Professor S. Jimmy Gandhi:
"Creation of an Entrepreneurial Mindset Among Undergraduate Students" with 1 CSUN student.

Other project activities that facilitated cohort participation in faculty research activities included small group mentoring sessions with faculty mentors, individual faculty mentoring appointments and introduction to appropriate professional society student chapters in the discipline of the faculty mentor.

Plans to Use of Performance Data to Monitor Progress

With actual performance measure data for both measures in this project objective for this period, we have reported baseline and actual performance measure in this report.

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

11. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Increase and enhance student-faculty interaction in STEM fields at CSUN

11.a. Performance Measure*	Measure Type	Quantitative Data**					
		Target*****			Actual Performance Data****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by 90 percent the frequency of student-faculty interactions over the 2010-11 baseline rate***	Project		220/220	100		139/220	63
			80/80	100		108/80	135

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**
*******Cohort 4 baseline data updated from Year4 to reflect non-matriculating students**

11.b. Performance Measure*	Measure Type	Quantitative Data					
		Target			Actual Performance Data		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Improve the quality of interactions between CSUN students and faculty in STEM field**	Project		/			/	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective

During the current performance period, we employed structured journals, observations, and interviews to assess the two performance measures of this objective with both Cohort 4 and Cohort 5 participants. These three data collection procedures represent a mixed-methods approach with the collection of both quantitative and qualitative data. In the student journals, guided by a set of close- and open-ended items, we asked respondents to indicate the number of interactions during the month and the types of interactions, including in-class interaction, faculty office hours, email contact, phone contact, Moodle interaction (online), supplemental lab session, faculty research project sessions, individual mentor appointment, group mentor meeting, on-campus project event, off-campus project event, or other event. Further, we asked

cohort participants to describe their interactions with their faculty mentor during the month. In addition to structured journaling, we conducted observations during the Student Research Symposium. More broadly, the AIMS^2 students presented the Summer 2016 research projects to the project staff and faculty during the monthly meeting (September 14, 2016), which was a key opportunity for faculty mentors to interact with students, and for students to reflect on their experiences. Furthermore, we conducted cohort participant interviews in Summer 2014 and early Fall 2014, which we detail below.

Interview Data Sources and Sample for Performance Measure 11b

In evaluating performance measure 10b, we analyzed a subsample of 24 interviews, all of which were conducted during Summer 2014 and early Fall 2014. Participants from the total sample were selected using a mixed sampling strategy of criterion and stratified purposeful sampling. Specifically, we used a criterion sample to select participants who met specific criteria for inclusion in the AIMS^2 program. These criteria include: a declared STEM major enrolled full-time in a CECS program; inclusion in a group that is economically, educationally, and environmentally disadvantaged or identification as Hispanic; and student transfer status. Additional criteria for inclusion in the interviews match AIMS^2 participation requirements, including the following: (a) pass all courses enrolled in each semester, (b) continue to be a declared STEM major, (c) enroll in a minimum of 12 units each semester, (d) earn a grade of "C+" or better in each class enrolled, and (e) participate in components of the program. In addition to the criterion strategy described above, we used stratified purposeful sampling in order to achieve a diverse sample. As such, we solicited interview participation from Cohorts 1, 2, 3 and 4 in Summer 2014 with a stratification based on gender, ethnicity, and program major. That is, we reviewed the full roster of AIMS^2 students in all cohorts and purposefully attempted to build a sample of students in specific strata. The goal of this sampling strategy was to create diverse groups by major, gender, and ethnicity. The sample of 24 interviews used to evaluate performance measure 10b reflects this diversity of the cohorts. With respect of student demographic characteristics, 19 interviewees identified as men and 5 as women, while 13 interviewees identified as Hispanic or Latino, 4 as Middle Eastern, 4 as White, 1 as Asian or Asian American, 1 as other, and 1 declined to state. As far as majors in engineering and computer science fields, 8 interviewees reported their major as mechanical engineering: 7 as computer science and computer information technology, 5 as electrical and computer engineering, 3 as civil engineering and construction management, and 1 as manufacturing systems engineering.

Interview Data Collection Instruments and Procedures for Performance Measure 11b

The primary instrument that we used to collect data from the 24 participants was an interview protocol. Overall, the interview protocol served to gather information from cohort participants related to validation and college-going capital in domains of family background, peer-peer interaction, student-faculty interaction, and academic and career preparation. For example, we asked the participants to respond to the following questions: What did you expect CSUN to be like when you first got here? Do you feel like you had the right experiences in your upbringing to prepare yourself for college? Do you feel like you need to have a certain background to be in your major? Have there been any situations where someone has taken an active interest in you, or thought you were capable of doing something, to get you more involved in your education? Using the interview protocol, we conducted one-on-one, 60-minute personal interviews with students from Cohorts 1, 2, 3, and 4, whom we invited to participate in the interviews through email. Once we received their response, we set times and dates for the interviews when both the particular student and one of the researchers could meet. The Dean's office arranged a secure, quiet room available for the interviews, which we conducted during Summer/early Fall 2014. To maintain and store confidential interview information, we assigned each cohort participant a three-digit random number. During the interview session, we shared an informed consent form with participants and audio recorded the session. Upon completion of the interviews, we transcribed the audio files into a de-identified data file. The recorded audio files were subsequently destroyed. We stored the transcribed files on a password-protected, secure laptop

Interview Data Analysis Procedures for Performance Measure 11b

After transcription, we proceeded with coding and thematic data analysis using ATLAS.ti, a computer-aided qualitative data analysis software program. Specifically, we used the themes that emerged from the ATLAS.ti analysis and from codes developed in hard copy transcribed data files. We then categorized the themes that emerged from codes that we clustered according to experiences and interactions of the cohort participants. These categories were used to align thematic findings to the performance measures associated with program objectives. Finally, we extracted direct quotes taken from the interviewees to illustrate themes and support overall findings.

<u>Description of Preliminary Findings Related to the Objective</u>

Preliminary Findings for Cohorts 4 and 5: Performance Measure 11a

During Cohort 4 (formation in Spring 2014) and Cohort 5 (formation in Fall 2014) questionnaire (monthly structured journal) administration, we asked interviewees the number of student-faculty interactions that they had in the Spring 2014 (Cohort 4) and Fall 2014 (Cohort 5)—to establish baseline data. Results from the questionnaire responses suggest that students in Cohort 4 recorded 116 discrete interactions with faculty in Fall 2013 prior to cohort entry in Spring 2014 and students in Cohort 5 logged a total of 42 separate interactions with faculty in Spring 2014 prior to cohort entry in Fall 2014. These figures represent the respective cohort baseline data for

the first performance measure (11a) and set the respective project targets of 220 (Cohort 4) and 80 (Cohort 5) total interactions between students and faculty. When we examine actual performance data for the first measure (11a), we find that Cohort 4 students reported that they had 139 total interactions with faculty in the current performance period, which does not exceed the project target (n=220) for Cohort 4 on this measure. Meanwhile, Cohort 5 students recorded a total of 108 interactions with faculty during the period, which exceeds the project target of 80 interactions for Cohort 5. These figures (n=139 for Cohort 4 and n=108 for Cohort 5) represent increases over the respective baseline figures (n=116 for Cohort 4 and n=42 for Cohort 5) for both cohorts and demonstrate continued progress toward meeting (but not meeting) the project objective (via Cohort 4) and in meeting the project objective (via Cohort 5) related to achievement of the performance measure to increase student-faculty interaction by 90% for both cohorts.

Preliminary Findings for Cohorts 4 and 5: Performance Measure 11b

Performance measure 11b relates to the quality of student-faculty interaction. After observing the Student Research Symposium and thematic analysis of transcribed interview data, we found that cohort participants generally maintained meaningful interactions with their faculty mentors. Moreover, many of the 24 individuals interviewed expressed beneficial and worthwhile relationships with their assigned faculty members. The causes for these attitudes include faculty mentors offering information related to studying, resources, and classes. Generally speaking to this point, one student said, "I get a lot from the professors experience; whenever I had questions, I'd find their office hours and I get help from them." More specifically, one student noted, "I would ask ways to improve my studying in order to get better grades. How can I improve myself? What kind of sources can I get in order to get a better understanding of the concepts taught in class? They were really helpful with these things." Another student agreed: "I always sought guidance from Prof. [redacted] here. [Redacted] was kind of like the person to go to if I had any issues for any problems. I'm not able to take this class. What can I do? {Redacted] would offer different suggestions, different paths I could take." While yet another student expressed a similar situation: "Dr. [redacted] gave us advice and told us what we needed to do and asked how we were doing." Through observation of the Student Research Symposium, we found that there were also meaningful interactions between students and faculty mentors through research participation. While working in research laboratories, students had the opportunity to interact with faculty and supplement what they were learning in class, or even gain experience with new theories ahead of time. One student said, "It was nice to get a heads up on what's coming in the upcoming year as far as academics." Having the opportunity to learn from faculty outside of the classroom increased their confidence in their academic studies. This sentiment of the benefit of working with faculty on research projects was echoed by another student when she said, "As transfer students we found this experience to be super rewarding. Not only did we become more familiar with campus, but also the things we would be learning." This student noted the academic advantage to working with faculty on a summer research project, but also noted how helpful it was to become familiar with the campus and faculty before her first semester in attendance.

While faculty mentors have proved to be a trove of information for pathways at CSUN, they have also given advice to AIMS^2 members regarding the STEM industry, professional association memberships, professional internships, and job opportunities. One student shared: "[Redacted] helped me a lot with the internship. [Redacted] was really friendly and [redacted] helped me to get familiar with my courses. Those were the main things that helped me get very comfortable here." In addition, several faculty mentors are in the habit of sending job and internship opportunities via email, as demonstrated by the following quote: "They tell you about all of the internships and opportunities going on. There's always an email from [redacted]. [Redacted] always sending out a bunch of emails about opportunities. [Redacted] always showing us these are the jobs that match your field." And another student shared a similar experience when they stated: "[redacted] send me emails if there are any internships related to my major." In some instances, faculty members have detailed their previous career experiences before coming to CSUN, lending unique insight to students for what lies ahead. On this point, one cohort participant stated, "Dr. [redacted] used to work for [redacted] also but [redacted] stopped and started teaching. I asked [redacted] once why [redacted] did that and [redacted] just said [redacted] preferred teaching. [Redacted] got a Ph.D. in engineering and started teaching."

Overall, though, the general support and encouragement that the faculty mentors provide seems to be their most effective qualities. As one student expressed, "So it's really nice. The professor explained everything to me and everything was great. [Redacted] really helps me a lot." In one instance, a faculty mentor provided encouragement for a student who had just been told by a different professor to switch majors. The student reflected, "I even told Dr. [redacted] about it. And [redacted] just told me that [it was] strange but you should just blow it off. Just do better and show him different." Additionally, faculty members can turn their regular weekly meetings with AIMS^2 participants into a quasi-support group. For example, one student stated, "We meet every week and we meet for about an hour or two hours with Dr. [redacted] and [redacted] two advisors are there…so then we have access to them. Apart from that they also give us their email and phone number and make themselves very accessible." At these meetings, faculty mentors can imbue students with confidence and the ability to take risks. Indeed, one participant described, "[Redacted] still goes ahead and gives us confidence and when we get to points where we might be stuck [redacted] shall bring in either former students or people in the field to give us a little help and we'll go from there. And because [redacted] gives us so much freedom I think that's where we get the confidence from that." The preceding quotes paint a

picture of the beneficial interaction between AIMS^2 cohort members and their faculty members. A participant member sums it up nicely: "If I wasn't in the AIMS program then I probably would have floundered a little bit…but I had that support group."

Description of Project Activities Related to the Objective

Overall, project activities are intended to facilitate frequent and quality student-faculty interaction in the current performance period. To that end, faculty mentors met regularly with their cohort participants to foster a faculty mentoring relationship; plan project activities; and to design research activities. More specifically, faculty mentoring with cohort participants facilitated the development of the peer tutor/mentor relationships, academic advisement and individual student meetings, supervision of student club/organization and club start-up, and coordination and facilitation of small group workshops. Additionally, faculty mentoring relationships tended to facilitate more frequent communication with cohort participant through multiple modes of communication such as email messages and phone calls. One result of these exchanges is that students secured permission numbers for closed classes for cohort participants. More broadly, the AIMS^2 project presented the Summer 2016 research projects to the project staff and faculty during the monthly meeting (September 14, 2016), which was a key opportunity for faculty mentors to interact with students. Furthermore, the AIMS^2 social supported interaction with faculty mentors. We should note that as upcoming events and activities approached, they were included on a calendar on the project's website (http://www.ecs.csun.edu/aims2/). Finally, the iPad initiative appears to have facilitated contact between faculty and students. For instance, Cohort 4 students reported using the iPad 175 times during the month of October during the project period. For the same month, Cohort 5 students reported using the iPad 123 times. For a complete picture of iPad use during the project period, please see the table of distribution of iPad use by cohort and month below:

iPad Use by Month and Cohort, AIMS^2 Cohort Participants, Cohorts 4 and 5, October 2015-September 2016

Month ***Cohort***	***Oct 15***	***Nov 15***	***Dec 15***	***Jan 16***	***Feb 16***	***Mar 16***	***Apr 16***	***May 16***	***Jun 16***	***Jul 16***	***Aug 16***	***Sep 16***	**TOTAL**
Cohort 4	175	270	110	104	39	0	123	0	0	0	0	0	**821**
Cohort 5	123	35	30	20	80	15	0	0	36	0	0	0	**339**
TOTAL	**298**	**305**	**140**	**124**	**119**	**15**	**123**	**0**	**36**	**0**	**0**	**0**	**1,160**

As seen in the table above, Cohort 4 and Cohort 5 students used the iPad 821 and 339 times during the course of the performance period. Not surprisingly, the peak months for iPad use among students included October through November and January through February (with November the highest recorded month in the period). On a per-student basis, Cohort 4 students logged an average of approximately 29 iPad uses and Cohort 5 students recorded an average of approximately 34 iPad uses during the period. When we explore how students used the iPad, we find that they reported academic and social functions that support their work as students. One student shared: "The ipad has become integral to my academic life. It houses all my notes, assignments, appointments, and even textbooks." Another student noted, "My iPad has drastically improved my academic experience. I can do all my homework on my iPad and read all my books. Also, I found a way to use, programs typically used on PC's, on my iPad." Finally, a student detailed: "I am very fortunate to have the iPad. It has been extremely useful. I use it daily to access information including classes, books, research, etc. I have transitioned to using it to take notes for several classes." Further, some students reported using the iPad for specific engineering and math applications. On this note, a student described: "I've been using "computer networking" app lately. It gives me lots of information about Cisco, preparing me to get a Cicso certificate." Another student shared, "I've found a few apps that have made note taking quicker and easier allowing me to consolidate notes and wirelessly share them with peers. I've also found fast math apps that make mathematical calculations quicker when doing lab reports." Beyond general academic and specific engineering and math functions, students report iPad use for communication and social reasons. Here, one student noted, "My iPad is so useful. I take it will me to school everyday and I use it everyday for both recreational and academic purposes. I use it everyday to communicate via email to my professors and peers. In fact I'm using my iPad to fill out this journal entry right now." Another student shared: "The most useful thing I use my iPad for is to check Moodle for anything new my professors post. It allows me to keep updated for anything new that my professors want us to have access to. Almost all of my professors use moodle and it helps me keep on top of my studies and keep in contact with my professors." Finally, a student detailed how he or she used the iPad for "emails, networking with others, note-taking, saving pictures of the board for later reference, and lately, for sharing those special moments such as graduation pictures in social networks."

Plans to Use of Performance Data to Monitor Progress

During the current performance period, data collection for both performance measures (11a and 11b) demonstrates substantive progress toward achieving this project objective. With the results from monthly student journaling and student interviews from Summer 2014/early Fall 2014, we have presented actual performance data for both measures to the project team. Further, we have used results from data collection in both Moodle and interviews to monitor progress in meeting this objective. Spe-

cifically, we have used Moodle cohort participant journal results to assess further progress on the first performance measure (11a) and student interviews to evaluate progress on the second performance measure (11b).

SECTION A - Performance Objectives Information and Related Performance Measures Data (See Instructions. Use as many pages as necessary.)

12. Project Objective **[ ]** Check if this is a status update for the previous budget period.

Enhance the peer environment of CSUN students in STEM fields

12.a. Performance Measure*	Measure Type	Quantitative Data**					
		Target*****			Actual Performance Data****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by 30 percent the number of CSUN students who participate in a cohort model over the 2010-11 baseline number***	Project		1/25	4		25/25	100
			1/9	11		9/9	100

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**
*******Cohort 4 baseline data updated from Year4 to reflect non-matriculating students**

12.b. Performance Measure*	Measure Type	Quantitative Data**					
		Target*****			Actual Performance Data****		
		Raw Number	Ratio	%	Raw Number	Ratio	%
Increase by 30 percent the number of CSUN students who participate in peer-peer tutoring sessions, over the 2010-11 baseline number***	Project		17/25	68		2/25	8
			7/9	78		1/9	11

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**
*******Cohort 4 baseline data updated from Year4 to reflect non-matriculating students**

12.c. Performance Measure*	Measure Type	Quantitative Data**					
Increase by 30 percent the number of CSUN students who participate in peer mentoring over the 2010-11 baseline number***	**Project**	**Target*****			**Actual Performance Data******		
		Raw Number	**Ratio**	**%**	**Raw Number**	**Ratio**	**%**
			8/25	**32**		**3/25**	**12**
			5/9	**56**		**2/9**	**22**

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Note that in the ratio columns of the target and actual performance data "the numerator represents the numerical target (e.g., the number of students that are expected to attain proficiency) or actual performance data (e.g., the number of students that attained proficiency), and the denominator represents the universe (e.g., all students served)" (Instructions for Grant Performance Report, p. 7).**
*****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**
******Upper row represents data for Cohort 4 (Spring 2014) and lower row represents data for Cohort 5 (Fall 2014)**
*******Cohort 4 baseline data updated from Year4 to reflect non-matriculating students**

12.d. Performance Measure*	Measure Type	Quantitative Data					
Improve the quality of peer-peer interaction**	**Project**	**Target**			**Actual Performance Data**		
		Raw Number	**Ratio**	**%**	**Raw Number**	**Ratio**	**%**
			/			/	

***Note that the performance measures for this objective have been disaggregated from the original performance measure for reporting purposes only.**
****Baseline data per Instructions for Grant Performance Report; baseline data collected by cohort/cohort entry year**

Explanation of Progress (Include Qualitative Data and Data Collection Information)

Evaluation Data Sources and Methods for the Objective

Quantitative Data Sources and Data Collection Procedures for Performance Measures 12a, 12b, and 12c

For Cohort 4 and Cohort 5, data collection during the performance period for these three measures of this objective includes cohort participant recruitment interviews/questionnaire administration (baseline data) and cohort participant structured journaling (actual performance data). Specifically, baseline data collection occurred in the Cohort 4 and Cohort 5 questionnaire administration in Spring 2014 and Fall 2014, respectively. During the questionnaire administration process, we asked cohort applicants the number of peer-tutoring and peer-mentoring sessions that they had in the one or two terms (i.e., six months) prior to program entry. In addition to data collection for the baseline measures, data collection to measure actual performance on the four measures consists of survey data collection (e.g., cohort journaling) and student interviews. With respect to the former, we included items to assess performance in these measures related to peer-peer interaction. In their journals, we asked cohort participants to indicate the number and types of interactions with peer mentors, peer tutors, and fellow cohort participants. The types of interactions under these three categories included: in-class interaction, Moodle interaction (online), email contact, phone contact, text message contact, social media interaction, faculty research session, supplemental lab session, group mentor/tutor session, on-campus project event, off-campus project event, and other event. Once submitted, we created Excel data extracts and then aggregated the number of peer tutoring, peer mentoring, and peer-peer interactions across cohorts.

Interview Data Sources and Sample for Performance Measure 12d

In evaluating performance measure 10b, we analyzed a subsample of 24 interviews, all of which were conducted during Summer 2014 and early Fall 2014. Participants from the total sample were selected using a mixed sampling strategy of criterion and stratified purposeful sampling. Specifically, we used a criterion sample to select participants who met specific criteria for inclusion in the AIMS^2 program. These criteria include: a declared STEM major enrolled full-time in a CECS program; inclu-

sion in a group that is economically, educationally, and environmentally disadvantaged or identification as Hispanic; and student transfer status. Additional criteria for inclusion in the interviews match AIMS^2 participation requirements, including the following: (a) pass all courses enrolled in each semester, (b) continue to be a declared STEM major, (c) enroll in a minimum of 12 units each semester, (d) earn a grade of "C+" or better in each class enrolled, and (e) participate in components of the program. In addition to the criterion strategy described above, we used stratified purposeful sampling in order to achieve a diverse sample. As such, we solicited interview participation from Cohorts 1, 2, 3 and 4 in Summer 2014 with a stratification based on gender, ethnicity, and program major. That is, we reviewed the full roster of AIMS^2 students in all cohorts and purposefully attempted to build a sample of students in specific strata. The goal of this sampling strategy was to create diverse groups by major, gender, and ethnicity. The sample of 24 interviews used to evaluate performance measure 10b reflects this diversity of the cohorts. With respect of student demographic characteristics, 19 interviewees identified as men and 5 as women, while 13 interviewees identified as Hispanic or Latino, 4 as Middle Eastern, 4 as White, 1 as Asian or Asian American, 1 as other, and 1 declined to state. As far as majors in engineering and computer science fields, 8 interviewees reported their major as mechanical engineering: 7 as computer science and computer information technology, 5 as electrical and computer engineering, 3 as civil engineering and construction management, and 1 as manufacturing systems engineering.

Interview Data Collection Instruments and Procedures for Performance Measure 12d

The primary instrument that we used to collect data from the 24 participants was an interview protocol. Overall, the interview protocol served to gather information from cohort participants related to validation and college-going capital in domains of family background, peer-peer interaction, student-faculty interaction, and academic and career preparation. For example, we asked the participants to respond to the following questions: What did you expect CSUN to be like when you first got here? Do you feel like you had the right experiences in your upbringing to prepare yourself for college? Do you feel like you need to have a certain background to be in your major? Have there been any situations where someone has taken an active interest in you, or thought you were capable of doing something, to get you more involved in your education? Using the interview protocol, we conducted one-on-one, 60-minute personal interviews with students from Cohorts 1, 2, 3, and 4, whom we invited to participate in the interviews through email. Once we received their response, we set times and dates for the interviews when both the particular student and one of the researchers could meet. The Dean's office arranged a secure, quiet room available for the interviews, which we conducted during Summer/early Fall 2014. To maintain and store confidential interview information, we assigned each cohort participant a three-digit random number. During the interview session, we shared an informed consent form with participants and audio recorded the session. Upon completion of the interviews, we transcribed the audio files into a de-identified data file. The recorded audio files were subsequently destroyed. We stored the transcribed files on a password-protected, secure laptop

Interview Data Analysis Procedures for Performance Measure 12d

After transcription, we proceeded with coding and thematic data analysis using ATLAS.ti, a computer-aided qualitative data analysis software program. Specifically, we used the themes that emerged from the ATLAS.ti analysis and from codes developed in hard copy transcribed data files. We then categorized the themes that emerged from codes that we clustered according to experiences and interactions of the cohort participants. These categories were used to align thematic findings to the performance measures associated with program objectives. Finally, we extracted direct quotes taken from the interviewees to illustrate themes and support overall findings.

<u>Description of Preliminary Findings Related to the Objective</u>

Baseline Data for Cohorts 4 and 5: Performance Measures 12a, 12b, and 12c

Through baseline data aggregated from results of Cohort 4 questionnaires, we find that no students (n=0) reported participation in a cohort model prior to program entry. Further, in Cohort 4 we identify 13 and 6 students—respectively—who participated in peer tutoring and peer mentoring prior to program entry. With Cohort 5, questionnaire responses indicate that the total number of students who participated in peer tutoring and peer mentoring in the Spring 2014 term is 5 and 4, respectively. In addition, results from document data collection of college records reveal that prior to Cohort 5 program entry, no students participated in a cohort model. These figures represent the baseline measures for all three measures, for Cohort 5. With these baseline data and project target increases of 30% for the three measures, we set project targets for Cohort 4 at 1/25 students (12a) or 4% of all cohort participants, 17/25 students (12b) or 68% of all cohort participants, and 8/25 students (12c) or 32% of all cohort participants. In light of these baseline data and the project target percent increases (30% for all three measures), the Cohort 5 project targets for these three measures are 1/9 students (or 11% of all cohort participants) for 12a, 7/9 students (or 78% of all cohort participants) for 12b, and 5/9 students (or 56% of all cohort participants) for 12c.

Overview of Preliminary Findings for Cohorts 4 and 5: Performance Measures 12a, 12b, and 12c

During the performance period, actual performance data for the three measures reveal mixed results across cohorts. Not surprisingly, data demonstrate that one measure—cohort model participation (12a)—exceeded project targets for both cohorts. Further, data for performance measure 12b show that the number of students who

participated in peer tutoring did not exceed project targets for both cohorts, and data for performance measure 12c indicate that the number of students who participated in peer mentoring lagged behind the project target for both cohorts.

Preliminary Findings for Cohorts 4 and 5: Performance Measure 12a

With respect to performance measure 12a (cohort participation), with the formation and induction of 34 total students in Cohort 4 (n=25) in Spring 2014 and Cohort 5 (n=9) in Fall 2014, there are 25 students (Cohort 4) and 9 students (Cohort 5) who currently participate in a cohort model, which supports the conclusion that we have exceeded the project target (i.e., 30% increase over the baseline) for this performance measure. That is, with the 25 (25/25 or 100%) current Cohort 4 and 9 (9/9 or 100%) Cohort 5 participants, we have exceeded the targeted 30% increase over the baseline (n=0) for both cohorts.

Preliminary Findings for Cohorts 4 and 5: Performance Measure 12b

As far as the second performance measure—12b or peer tutoring—we find that 2 students (or 8% of cohort participants) in Cohort 4 reported having participated in peer tutoring activities during the period—a decrease of 8 (n=10) students from the previous performance period. In Cohort 5, 1 student (1/9 or 11%) reported participation in peer tutoring during the period. Consequently, actual performance data for this measure represent a decrease over the baseline (n=13) for Cohort 4, as well as a decrease over the baseline (n=5) for Cohort 5. These figures remained the same as actual performance data from measure 9a (tutoring) for both cohorts. When assessed as a function of projects target, performance data demonstrate that we continue to log steady and substantive progress on this performance measure for Cohort 4 (2/25 or 8% actual vs. 17/25 or 68% target) and Cohort 4 (1/9 or 11% actual vs. 7/9 or 78% target). When we examine peer-tutoring participation by major, we find that—between Cohorts 4 and 5—students across several majors participated in peer tutoring and slightly higher percentage of students in Cohort 5 than Cohort 4 participated in peer tutoring.

Peer Tutoring Participation by Major and Cohort, AIMS^2 Cohort Participants, Cohorts 4 and 5, October 2015-September 2016

Major / ***Cohort***	*Civil Engineering and Construction Management*	*Computer Science*	*Computer Information Systems*	*Electrical Engineering*	*Manufacturing Systems Engineering*	*Mechanical Engineering*	**TOTAL**
Cohort 4	1	1	0	0	0	0	**2**
Cohort 5	0	0	0	0	1	0	**1**
TOTAL	**1**	**1**	**0**	**0**	**1**	**0**	**3**

As we see in the table above, civil engineering and construction management (n=1), computer science (n=1), and manufacturing systems engineering (n=1) each recorded a student who participated in tutoring. Finally, while more students from Cohort 4 participated in tutoring (2 in Cohort 4 vs. 1 in Cohort 5), a greater percentage of Cohort 5 students (11% in Cohort 5 vs. 8% in Cohort 4) engaged in peer tutoring during the performance period.

Preliminary Findings for Cohorts 4 and 5: Performance Measure 12c

When we look at performance measure 12c for Cohort 4, three students (12% or 3/25 students) reported participation in peer mentoring. For Cohort 4, these data indicate that the performance measure has not been achieved for the period (12% actual vs. 32% target). When we look at the data for Cohort 5, we see that 2 of 9 students in Cohort 5 (or 22% of all Cohort 5 participants) engaged in peer mentoring during the performance period. In light of the data , we can conclude that the performance measure has not been achieved (project target: 5/9 students or 56% of all students) for Cohort 5.

Preliminary Findings for Performance Measure 12d

With respect to the fourth and final performance measure (12d), which evaluates the quality of peer-peer interaction, the interview data reveal a peer environment conducive to meaningful connections. In particular, the AIMS^2 program promotes mutually beneficial relationships between students. This can be seen in the projects and study partnerships they create. For one student, his peers in AIMS^2 helped make his academic experience more manageable: "No, it was hard. A lot of the concepts were new and I didn't know anyone so I really didn't have that much confidence. I didn't want to talk to other people or get into study groups. So the first semester, a lot of it was studying on my own until I started connecting with people in AIMS. It eventually clicked; it eventually got easier." Another student shared a similar story: "We do. We help each other whenever we have trouble with projects or homework or anything like that." Interestingly, several of these students use one another as motivators. According to one student, "I get to see most of the same students here and I get to see that they are pretty focused and dedicated toward their major. It kind of inspires me to also be focused." One cohort student supported this statement, saying, "I feel more capable. I see that they work very hard for their major and for their career and

it makes me want to work harder for my major and my career. So if they could do it, I could do it." Yet another student echoed this sentiment, citing a specific cohort member: "I've taken a lot of classes with him so we studied together a lot and he's pretty motivated and really wants to succeed. It helps me also to succeed because he always wants study." Overall the program fosters a sense of community rather than competition. As one student stated, "I don't feel like I'm competing with them [peers]. I feel like we're motivating each other and pushing each other to do even better." And another said, "I feel like the AIMS program has given us that little step in the right direction for making connections." And many students spoke about friends they made through the program being beneficial. One student explained, "…that's what's going to help me: my friends and being comfortable in this environment, I guess." While another shared that, "I met some really nice friends and we got together to study and we're constantly talking about either school-related things or about our own lives." Finally, one student described the benefit of this environment when they said, "With the friend that was in my class, [redacted] would help me with the material and then after learning the material I would think that this wasn't so bad like I can definitely do this."

Another notable facet of the peer-peer interaction within AIMS^2 includes the effectiveness of the peer tutors and advisors. These individuals hold valuable institutional knowledge that aids cohort participants as they progress through their undergraduate education. As we heard in the interviews, advisors answer practical questions ("I would ask her questions like, 'How did you apply? What did they ask you?'"), offer encouragement ("It's just the thought of someone saying you can do it and keep doing it. Eventually it's going to come to you. It motivates you to do better"), and even listen to mundane details about life outside of school. And the tutors were able to direct students to valuable resources. For example, one student explained, "Well she was my mentor and also my tutor. I was telling her that I was having trouble buying books and stuff and she was like, 'well you should apply here. They give you money to buy books.'" The tutors also appear to be especially dedicated to the AIMS^2 students. Illustrating this point, one participant remarked, "The tutors were there if you ever had trouble. You could call them up and set up an appointment to go over your homework or prep for a test or something. Actually, I have a few of them in my phone." While another participant noted, "[redacted] was the tutor that helped me out a lot. He also gave me advice too like who to take, how to get A's and stuff."

Nevertheless, a few students vocalize some challenges integrating with their peers. For example, one student expressed, "I don't think knowing the right people has helped. I don't know anyone." Additionally, AIMS^2 participants recognize that some of their peers prefer to keep a distance. On this point, a participant said, "I think it's just some of them don't want to make those connections. Even in our group we have people who do want to work with others and people who don't want to work with others. You can't really force either one, you just kind of see who wants to and that's about it." And another student flatly stated, "It sounds a little bad but I'm not here to make friends."

Clearly, though, the peer-peer environment within AIMS^2 generally fosters a positive academic experience. As one student put it: "At first, [I had] culture shock, but now I feel more at home because everybody is in the same place as me. Like we are all new to this kind of thing so it feels good." And, as one faculty mentor summarized: "In some respects, this program is effective because people tend to be more productive and motivated to do research (or do well in classes) if they have someone to work with, someone they can relate to, or someone they may have known from the community college."

<u>Description of Project Activities Related to the Objective</u>

During the performance period, project faculty and staff worked to meet these four project measures of this objective. Specifically, we formed the fourth (Cohort 4) and fifth (Cohort 5) cohorts of student participants during the Spring 2014 and Fall 2014 terms, respectively. Further, we formed Cohort 6 in Fall 2015. To support the development of a quality peer environment and frequent peer-peer interaction, we developed both a peer-tutoring component and a peer-mentoring component to the project and hope to foster peer interaction through both peer- and faculty-mentors. In particular, we continued to advertise, recruit, hire, and train peer tutors from CSUN's upper-division undergraduate and graduate students in the College of Engineering and Computer Science. In addition to peer tutoring, we conducted training of peer mentors for cohort participants. Finally, to facilitate a strong environment connected to both instructional and faculty research activities, faculty mentors facilitated weekly small group mentor sessions with cohort participants during the period. In addition to supporting student-faculty interaction and student development, these sessions are intended to facilitate peer-peer interaction. Finally, project faculty and staff planned project activities to encourage peer interactions, including on- and off-campus projects and events. These include an introduction to an appropriate professional society student chapter in the discipline and related activities – technical talks, presentations, student chapter activities etc. and visits with the cohort students from Glendale Community College and College of the Canyons. Finally, the iPad initiative likely has facilitated contact between peers—as Cohort 4 and Cohort 5 students reported use throughout the performance period. For instance, Cohort 4 students reported using the iPad 175 times during the month of October during the project period. For the same month, Cohort 5 students reported using the iPad 123 times. For a complete picture of iPad use during the project period, please see the table of distribution of iPad use by cohort and month below:

iPad Use by Month and Cohort, AIMS^2 Cohort Participants, Cohorts 4 and 5, October 2015-September 2016

Month / ***Cohort***	***Oct 15***	***Nov 15***	***Dec 15***	***Jan 16***	***Feb 16***	***Mar 16***	***Apr 16***	***May 16***	***Jun 16***	***Jul 16***	***Aug 16***	***Sep 16***	**TOTAL**
Cohort 4	175	270	110	104	39	0	123	0	0	0	0	0	**821**
Cohort 5	123	35	30	20	80	15	0	0	36	0	0	0	**339**
TOTAL	**298**	**305**	**140**	**124**	**119**	**15**	**123**	**0**	**36**	**0**	**0**	**0**	**1,160**

As we see in the table above, Cohort 4 and Cohort 5 students used the iPad 821 and 339 times during the course of the performance period. Not surprisingly, the peak months for iPad use among students included October through November and January through February. On a per-student basis, Cohort 4 students logged an average of approximately 29 iPad uses and Cohort 5 students recorded an average of approximately 34 iPad uses during the period. When we explore how students used the iPad, we find that they reported academic and social functions that support their work as students. One student shared: "The ipad has become integral to my academic life. It houses all my notes, assignments, appointments, and even textbooks." Another student noted, "My iPad has drastically improved my academic experience. I can do all my homework on my iPad and read all my books. Also, I found a way to use, programs typically used on PC's, on my iPad." Finally, a student detailed: "I am very fortunate to have the iPad. It has been extremely useful. I use it daily to access information including classes, books, research, etc. I have transitioned to using it to take notes for several classes." Further, some students reported using the iPad for specific engineering and math applications. On this note, a student described: "I've been using "computer networking" app lately. It gives me lots of information about Cisco, preparing me to get a Cicso certificate." Another student shared, "I've found a few apps that have made note taking quicker and easier allowing me to consolidate notes and wirelessly share them with peers. I've also found fast math apps that make mathematical calculations quicker when doing lab reports." Beyond general academic and specific engineering and math functions, students report iPad use for communication and social reasons. Here, one student noted, "My iPad is so useful. I take it will me to school everyday and I use it everyday for both recreational and academic purposes. I use it everyday to communicate via email to my professors and peers. In fact I'm using my iPad to fill out this journal entry right now." Another student shared: "The most useful thing I use my iPad for is to check Moodle for anything new my professors post. It allows me to keep updated for anything new that my professors want us to have access to. Almost all of my professors use moodle and it helps me keep on top of my studies and keep in contact with my professors." Finally, a student detailed how he or she used the iPad for "emails, networking with others, note-taking, saving pictures of the board for later reference, and lately, for sharing those special moments such as graduation pictures in social networks."

<u>Plans to Use of Performance Data to Monitor Progress</u>

With monthly student journaling during the performance period and student interviews during the fourth year, we have reported actual performance data for all four measures in the performance report for the fifth year of the project period. We have used results from data collection in both Moodle and interviews to monitor progress on all four performance measures related to this objective. In particular, we have used Moodle cohort participant journal results to assess further progress on the first performance three measures (12a-12c) and student interviews to evaluate progress on the final performance measure (12d).

SECTION B - Budget Information (See Instructions. Use as many pages as necessary.)

SECTION C - Additional Information (See Instructions. Use as many pages as necessary.)