

# *Welcome to AIMS<sup>2</sup>(HSI-STEM Grant) 2014 External Advisory Board Meeting Meeting # 27*

**CSUN  
SHINE**



*JD 1568  
2 PM - 4PM  
June 12, 2014*

06/12/14

AIMS(HSI-STEM Grant) Meeting  
# 27

•AIMS<sup>2</sup> Cohort: Photo Courtesy Armando



# *AGENDA*

- 2 PM Welcome and Introductions – External Advisory Committee
- 2:10 PM Overview of grant
  - Program News and Plans for Year 4– Ramesh
- 2:20 PM Project Evaluation and Progress to date – Nathan
- 2:50 PM Project Activities/Academic Progress of Cohorts
  - Glendale Community College – Jan Swinton, Scott Rubke and Richard Cortes
  - College of the Canyons – David Martinez and Eric Lara
  - CSUN – Bob Ryan, and Tesha
- 3:10 PM Feedback and Discussion - External Advisory Committee
- 4:00 PM Adjourn



## *External Advisory Committee*

- Ms. Roslyn Soto, JPL
- Dr. Vaughn Cable, JPL
- Mr. Luis Carbajo, IEEE LA Council Vice Chair
- Ms. Linda Friedman, Northrop Grumman, Woodland Hills
- Mr. Neal Gaborno, Raytheon
- Mr. Bill James, Avery James Inc.,
- Prof. Miguel Macias, Emeritus faculty CSUN
- Mr. Tony Magee, PWR
- Mr. Michael Medina, Hill International, San Diego
- Mr. David Naiditch, Aerospace Corporation
- Dr. Rick Ratcliffe, Dean emeritus CSUN



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## *Goals and Objectives*

- To increase the number of Hispanic and low-income students who successfully transfer from Glendale Community College (GCC), and College of the Canyons (COC) to California State University, Northridge, to pursue majors in Engineering and/or Computer Science.
- To increase the number of Hispanic and low-income students who join CSUN as upper division transfer students and graduate with degrees from one of the undergraduate programs in the College of Engineering and Computer Science.
- To develop a model, seamless and sustainable transfer program to assist Hispanic and low-income students to successfully transfer from GCC and COC to California State University, Northridge where they will complete their studies in Engineering and/or Computer Science.



# *Project Activities*

- Tutoring to improve student performance in preparatory Math and Science courses.
- Advising and tracking of students in cohort
- Work closely with faculty and staff in feeder community colleges to develop seamless articulation agreements, especially for students transferring from 2 year colleges to CSUN.
- Create a mobile digital environment with Tablet PCs , iPad's, and appropriate software, so that the project team can work with the cohorts to enhance communication, engagement, collaboration and creativity, and instant learning assessment.
- Expand Facilitated Academic Workshops (FAW) in required introductory courses and key upper division courses offered by the college's programs
- Faculty/Peer mentoring and career advising of students in the cohort
- College wide events focused on careers and jobs such as the biannual Tech Fest events held in February and September.
- Provide students with opportunities to work on hands-on projects and research activities that encourage them to stay connected with their majors



## *Nuts and Bolts*

- All cohort students meet regularly as a group with faculty mentor and peer mentor from their respective program
- All cohort students maintain an online journal using Moodle with submissions required on a monthly basis – responses to prompts and additional information
- All faculty mentors maintain an online journal with submissions required once/semester
- Lead project faculty from GCC, COC and CSUN meet regularly to address gaps in articulation agreements and collaboratively develop curriculum to address gaps
- Monthly meetings of the entire team to review progress on key project measures and activities.
- Annual meeting with External Advisory Committee
- Bi-annual gathering of the cohorts at partner colleges to promote interaction



# *Proposed Cohort Size*

3 Cohorts for a total of 180 students

90 Students from CC, 90 First Time Transfer Students at CSUN

Year	GCC	COC	CSUN	Total
Year 1	15	15	30	60
Year 2	30	30	60	120
Year 3	30	30	90	150
Year 4	15	15	90	120
Year 5			60	60
Total	90	90	330	510



## *Students served to date*

- Since January 2012 we have served a total of 161 students in three cohorts (approximately 67 % Latino/a). This includes 87 first-time transfer students at CSUN, 38 students at GCC, and 36 students at COC.



## *Budget Update*

Year ▼	Proposed ▼	Awarded ▼	Difference ▼	% Difference ▼
Year 1	\$1,096,856	\$1,096,856	\$0	
Year 2	\$1,140,998	\$1,134,630	(\$6,368)	-0.56%
Year 3	\$1,132,511	\$1,128,888	(\$3,623)	-0.32%
Year 4	\$1,129,743	\$1,075,169	(\$54,574)	-4.83%
To Date	\$4,500,108	\$4,435,543	(\$64,565)	-1.43%
Year 5	\$1,062,659	\$1,041,659	(\$21,000)	-1.98%
	\$5,562,767	\$5,477,202	(\$85,565)	-1.54%





## **The AIMS<sup>2</sup> Project Team**

### **Attract, Inspire, Mentor, and Support Students**



**Faculty and Staff from the College of the Canyons, Glendale CC,  
& the College of Engineering and Computer Science, CSUN**



## *25<sup>th</sup> Anniversary of HEENAC*

### *October 2013*

- What happens when you mix 250 college students, over 20 teams comprised of companies and government agencies, five rounds of competition, scholarships, and a lot of really cool prizes? The one and only HENAAC College Bowl™ powered by Great Minds in STEM™!!  
The College Bowl was sponsored by NASA.



*Congratulations Leslie Pluma  
College Bowl – HEENAC- Great Minds in STEM – October 25, 2013  
Third Place Winner- Northrop Grumman*





## HACU 27<sup>TH</sup> ANNUAL CONFERENCE

Championing Hispanic Higher Education Success: Securing the American Dream  
October 26-28, 2013 • Hilton Chicago • Chicago, IL



Top undergraduate students from colleges and universities throughout the U.S. and Puerto Rico will be active participants at HACU's 27th Annual Conference in Chicago, IL, October 26-28, 2013. These students represent a wide range of academic disciplines. They arrive with resumes, eager to discuss career, internship, research and advanced education opportunities.

A limited number of scholarships are available to eligible students to attend the HACU conference. Student Track Scholarships will cover costs for: (1) conference registration; (2) travel and lodging for out-of-state students; (3) and conference-related meals (1 per day). Conference Scholarship recipients are required to attend ALL Student Track activities. Scholarships are provided to students by HACU's corporate and federal sponsors.

Congratulations  
Stephanie Medina and  
Noe Hernandez on  
being selected  
amongst the 20  
recipients nationally!



CE Major



ECE Major



## *Another clean sweep at CCSC 2014*

**First Place\*** – “An interactive classroom management tool – Class Pi” – Oliver Barreto, Karoon Gayzagian, Paulo Osuna, Edward Salcido, Tatevik Sardaryan, Katren Ter-Oganesyan, Felix Villa and Juan Zepeda. Faculty Advisor – Prof. Gloria Melara

\*Students from the AIMS<sup>2</sup> program supported by the US Department of Education HSI-STEM grant.

**Second Place:** “Implementation of Reagent Reducing Digital Microfluidic Biochip Algorithm” – Matt Newbill\*, Philip Brisk\*\*. Faculty Advisor – Prof. Ani Nahapetian

\*Matt is a CSUN Presidential Scholar who is being mentored by Prof. Nahapetian.

\*\*Philip Brisk is with UC Riverside.

**Third Place:** “SpotIt: Detect Device Placement Using the Accelerometer” – Dina Najeeb. Advisor: Prof. Ani Nahapetian



- **First Place\*** – “An interactive classroom management tool – Class Pi” – Oliver Barreto, Karoon Gayzagian, Paulo Osuna, Edward Salcido, Tatevik Sardaryan, Katren Ter-Oganesyan, Felix Villa and Juan Zepeda. Faculty Advisor – Prof. Gloria Melara
- **\*Students from the AIMS<sup>2</sup> program supported by the US Department of Education HSI-STEM grant.**



**SpotIt: Detect Device Placement Using the Accelerometer**  
Dina Najeeb, Ani Nahapetian  
California State University, Northridge

**Introduction:** Use the device motion sensor to detect device placement on the person

- The current advances in mobile sensing technologies allowed most of the mobile device inventory to be equipped with implementable motion sensors such as the accelerometer.
- There are few context-aware applications in the market that deal with determining the device placement location while it is in use.
- Creating such applications allow the development of new and robust services for a wide range of fields such as social networking, elderly care, and warning systems.

**Background and Motivation:** Accelerometers are one of the most widely available motion sensors in smartphones and tablets.

- The tri-axial accelerometer returns three values: X, Y, and Z. Each one of these values correspond to the acceleration felt on the axis of the device at any given time.
- The sensor's coordinate system never changes as the device moves and the axes are not swapped when the device's screen orientation changes.

**System Architecture:** The high level design of the system

The system architecture shows the flow from the Android Device (Accelerometer, GPS, UI, App Code) to the App Code (High-pass Filter, Create User File, App Software), which then interacts with the Cloud (Create Statistical Database, App Software, SQL server database engine) and the User Interface (App Software, SQL server database engine).

**Approach and Results:** collect and analyze the embedded tri-axial accelerometer data

- Filter the raw data by removing the high-frequency noise and keeping the slower changing, short-lived low-frequency data.
- Analyze the mean values for every 20 raw sensor readings (frequency window):  $\bar{x} = \frac{x_1 + x_2 + \dots + x_n}{n}$
- Calculate the confidence intervals to show how reliable the results are:  $\pm \sqrt{\frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})^2} \Rightarrow \left[ \bar{x} - \frac{0.95}{\sqrt{n}} \bar{x}, \bar{x} + \frac{0.95}{\sqrt{n}} \bar{x} \right]$
- Manually validate the system's detection accuracy. The accuracy percentage is calculated by dividing the number of correct detections over the total number of detections.

**Findings:** Use predefined classes that contain values threshold to classify sensor position.

- Jackpot: Left Pocket** - device head pointing down. Sensor pointing away from user. Sensor pointing away from user.
- Jackpot: Right Pocket** - device head pointing down. Sensor pointing away from user. Sensor pointing away from user.
- Parade** - head horizontally. Sensor pointing away from user. Sensor pointing away from user.
- Left & Right Pocket** - device head pointing down. Sensor pointing away from user. Sensor pointing away from user.
- Left & Right Pocket** - device head pointing down. Sensor pointing away from user. Sensor pointing away from user.

California State University, Northridge

• Third Place: “SpotIt: Detect Device Placement Using the Accelerometer” – Dina Najeeb. Advisor: Prof. Ani Nahapetian



# *AIMS<sup>2</sup> Students are Leaders*



Melissa Flores –  
President ASME Student Chapter  
2014



Eric Gamoning-  
Secretary, IEEE-HKN  
2014



*CSU Engineering Day – Sacramento*  
*May 13, 2014*



Chris Erickson (Aerojet-Rocketdyne), Ramesh, Melissa Flores, Jimmy Gandhi



## *Reception at Mayor Garcetti's home*



- To encourage Latino/a students for the Rhodes Scholarship program
- Three of our cohort students – Melissa Flores (ME), Stephanie Medina (CE) and Dina Najeeb (CS) were nominated and attended on April 8



## *AIMS<sup>2</sup> at National Conferences*



- 6th Annual HSI/Title V Best Practice Conference - AHSIE 2014 Conference – March 16-19, LaVerne College
- See [www.ahsie.org/conference](http://www.ahsie.org/conference) for details
  - Bob Ryan and Nathan Durdella, “Increasing the STEM Pipeline: A Community College/CSUN Partnership”
  - Ramesh, Bill Head (CSUMB), Jose Hernandez (Napa Valley CC) – Invited Panel on “Successful Structured Interventions from HSI-STEM grantees”



## Nomination for National Award

Ramesh, S K

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**From:** Elena Segura <esegura@edexcelencia.org>  
**Sent:** Thursday, April 24, 2014 1:02 PM  
**To:** Ramesh, S K  
**Subject:** Examples of Excelencia-Program Nominated

Dear Mr. S. Ramesh:

Congratulations! Your program or department, HSI-STEM Project/College of Engineering & Computer Science, has been nominated for the 2014 Examples of *Excelencia* initiative. In order to be considered for this national recognition, you will need to submit a profile for your program no later than May 2nd, 2014 at 5 pm EST. You can submit your program's profile and obtain additional guidance about the process at: <http://www.edexcelencia.org/create-profile>.

**Background:**

Examples of *Excelencia* is the only national data-driven initiative focused on identifying and recognizing programs/departments with evidenced-based practices that increase Latino student success in higher education. We focus on results and on disseminating these promising practices to others interested in serving Latino students.

**Benefits:**

This year, a committee of national experts will recognize four programs as the 2014 Examples of *Excelencia*, identifying one from each of four categories: associate, baccalaureate, graduate, and community-based organizations. Each will receive a \$5,000 financial award, a featured listing in the 2014 edition of What Works for Latino students in Higher Education, and inclusion in our online searchable Growing What Works database. A representative from each program will be flown to Washington, DC for the 2014 *Celebración de Excelencia*, held September, 30th 2014 and will be invited to be part of a plenary panel to discuss their work on October 1st, 2014 for the ALASS (Accelerating Latino Student Success) Workshop.

If you have any questions, please contact us at [examples@EdExcelencia.org](mailto:examples@EdExcelencia.org).

We look forward to learning more about your program or department's efforts to accelerate Latino student success at the associate, baccalaureate, graduate, or community-based organization levels.

Best,

Elena Segura  
Program Manager  
Excelencia in Education  
[www.EdExcelencia.org](http://www.EdExcelencia.org)  
1717 N St. NW, 2nd floor  
Washington, DC 20036  
202-785-7350 ext. 1104







# CSUN SHINE

Internet Explorer browser window showing the website <http://www.edexcelencia.org/our-work>.

## Our Work

**About**

- Our Work**
- Our History
- What Others Say
- Strategic Plan
- Our People
- Our Support
- News
- Events
- Connect

SHARE    

Some believe a focus on race and ethnicity divides us as a society. At *Excelencia* in Education, we believe acknowledging racial and ethnic trends describes our society in useful ways. Using data and analysis to identify factors that influence the success of specific student populations establishes the base line information from which to develop more effective policies, engage diverse stakeholders, and enhance the active and tactical responses needed to better serve Latino and all students.



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## *Exploring Project Performance*

- Evaluation framework
- Overall approach and findings
- Trends in quantitative measures
- Patterns emerging from qualitative measures
- Focus areas and recommendations
- Next steps



## *Evaluation Framework: Project Year 2*

- Project objectives guided the evaluation as an embedded mixed methods case study design
  - Merriam (2009) and Stake (1995): cross case comparison, use of diverse methods/procedures
  - Unique needs across campuses: CSUN, GCC, COC
    - Student and faculty/staff needs and project objectives at each campus direct assessment approaches
  - Team effort: coordination, implementation



## *Diverse Data Sources*

- Diverse data sources
  - Cohort participants (students), mentors (faculty), staff, and institutional data
- Mixed sampling/recruitment
  - Criterion sampling and email invitations to cohort participants for questionnaire, journals, interviews
    - Miles and Huberman (1994): stratified purposeful sampling strategy: major/background strata



## *A Collection of Procedures*

- Questionnaires
  - Entry and annual (assessment) instruments for students tied to measures at GCC
  - Entry instrument: CSUN applicant interview
- Structured journaling
  - Monthly journal guides for students to record participation in project activities
- Personal and group interviews
  - Annual student interviews (GCC and CSUN)



## *A Mix of Analytical Approaches*

- Descriptive statistical analysis
  - Frequency analysis with institutional data (COC/CSUN), questionnaire (GCC)/journal (CSUN) data
- Thematic data analysis
  - Segmenting, coding, clustering, and thematizing textual data from personal (CSUN) and group (GCC) interviews



## *The Big Picture: Objectives and Measures*

- 12 objectives shape 35 performance measures
  - 35 performance measures guide assessment tasks
    - Measure types: project (4), non-cohort (3), cohort (28)
  - 28 quantitative, 7 qualitative measures shape data
    - Quantitative measures
      - Transfer, completion, articulation, advising sessions, tutoring, mentoring, student-faculty interaction, research participation,
    - Qualitative measures
      - Effects of interaction: student-faculty, peer-peer, faculty research



## *Types of Measures Guide Assessment*

- 35 performance measures: 3 types
  - 4 project measures assessed across campuses
    - Transfer, articulation, completion
  - 3 non-cohort measures campus--not cohort--specific
    - Counselor STEM PD, academic advisors
  - 28 cohort measures relate directly to cohorts
    - Advising, tutoring, student-faculty interaction, peer tutoring, mentoring, workshops, labs, research, cohorts



## *Cohort Growth Expands Assessment*

- A cohort model required a unique approach
  - With the formation of the second cohort, we needed to assess cohort measures by cohort
    - Baseline data and actual performance data collected by cohort, analyzed by cohort, assessed by cohort targets
  - This approach applied the 28 cohort measures to each cohort for the performance period
    - Cohort data reported across 28 cohort measures resulted in 56 discrete (quantitative and qualitative) data points



## *The Big Picture: Overall Findings*

- Of 63 total measures, **36 measures (57%) met or exceeded project targets or demonstrated improvement in quality** for both cohorts
  - Data for the quantitative measures (n=49) reveal that 26 (or 53%) measures met or exceed project targets
  - Results for the majority of qualitative measures (n=10/14) point to improvement in quality of peer-peer and student-faculty interaction, research participation



## *General Trends in Quantitative Measures*

- All 4 ***project measures***—transfer (1a), course articulation (2a/b), and completion (7a) met or exceeded project targets in the period
- All 3 ***non-cohort measures***—Counselor STEM PD (3a) at GCC/COC, academic advisors at CSUN (8a)—met or exceeded project targets
- 19 of 42 (45%) ***cohort measures*** across campuses met or exceeded targets in the period



## *Trends: Transfer and Completion*

- Transfer achievement exceeded target
  - 44 new CSUN transfer students entered in 2012-13 from COC/GCC in a field housed in CECS
    - 122% increase over the project target (n=36) and a 210% increase over baseline figure (n=21) from 2010-11
- Program completion exceeded target
  - 40% (25/63) completed a degree program for the most recent period vs. 31% (21/68) project target



## *Trends: Strengths in Cohort Measures*

- GCC/COC counselor STEM PD increased
- COC academic advising in Cohort 2 up, quality of GCC student-faculty interaction improved
- Student-faculty interaction at all three campuses dramatically increased during the period
- Academic workshops, supplemental labs, and faculty research at CSUN exceeded targets
- CSUN academic advising, peer mentoring increased



## *Trends: Focus Areas in Cohort Measures*

- Academic advising at GCC/COC (Cohort 1) generally did not meet project targets
- Peer tutoring participation at GCC, COC, and CSUN fell *slightly* below targets in the period
- Cross-campus collaborative cohort measures
  - GCC/COC online CSUN course enrollment = low
  - CSUN cohort peer mentoring of GCC/COC cohort fell below targets for second consecutive year



## *Quantitative Measures: Interpretation*

- Faculty work with cohort participants—advising, mentoring, supervising research—is clear strength
- Project faculty and staff efforts to develop academic workshops, events, activities pays off
- Lower peer tutoring/mentoring rates = greater percentage: Cohort 1 students → senior standing
- Nearly none of GCC/COC cohort participation in CSUN online courses = no course offerings



## *General Patterns in Qualitative Measures*

- In general, results reveal positive effects of student-faculty interaction, peer-peer interaction, and faculty research participation on student experiences and learning
- Overall, 10 of 14 (71%) qualitative measures demonstrate improvement in quality of student-faculty and peer environments on campus



## *CSUN Faculty Research: Student Learning*

- Faculty research prepared students academically by presenting students with typical problems and solutions in the field and concepts in class
  - “I was learning techniques used in the field.”
  - “Working on the [redacted] helps me to learn concepts.”
  - “After participating in the research projects, I felt better about my classes; I understood the material.”



## *CSUN Faculty Research: Career Readiness*

- Research projects connected students to careers
  - “Research experience helps with career and my individual work presentations.”
  - “[Redacted] has made me look differently at my self, what I can do and where I can go with what I am learning.”
  - “Being able to work in a group teaches me skills for later on, like work plans...[as] part of a group.”



## *CSUN Faculty Research and Skill Building*

- Research competitions build career capital and practical skills marketable in career fields
  - “Attending a national conference gave me confidence. I felt better about myself.”
  - “The [redacted] competition was really exciting. I met people in the industry...good for me and my future.”
  - “I was presenting my research to other people across the country [and] accomplished something really big.”



## *Student-Faculty Interaction at GCC*

- Overall, positive interactions with GCC and CSUN faculty to “learn more about a specific topic” in the field and to facilitate a familiarity with “working environment” at CSUN
  - Guest speakers, including faculty from GCC and CSUN, attended monthly sessions and shared information on a range of STEM issues
  - Two participants from Cohort 1 and one participant from Cohort 2 participated in a CSUN internship



## *Student-Faculty Interaction at CSUN*

- Overall, students reported meaningful, fulfilling interactions with supportive CSUN faculty
  - “My faculty mentor is very helpful...willing to listen” and “is friendly...we just talk”
  - “My faculty mentor is very helpful and is always willing to listen.”
  - “[I] find the instructors very approachable” and “friendly,” including times “when I have a question, they answer them and help me.”



## *CSUN Faculty Interaction as Advising*

### **Served as information source in advising role**

- “The face-to-face meetings with my faculty mentor has been great. I get my questions answered and also get extra information that I need.”
- “My interactions with faculty mentors help me to learn a lot of new stuff [and have] given me some ideas towards a career and also helped me in classes.”



## *CSUN Faculty Interaction and Learning*

### **Unique interaction effects on student learning**

- “The interaction with the professors help me to augment what I am learning in class. They have been great to me.”
- “My interactions with faculty mentors help me to learn a lot of new stuff and they just help a lot. My participation in the [redacted] project has...helped me in classes.”



## *Changes: CSUN Faculty Interaction*

- Student interaction with faculty appeared to be related to behavioral changes in students
  - “My faculty mentor...guides me on the right path. [Redacted] tells me exactly what I have to do.”
  - “My faculty mentor changed my attitude about homework.”
  - “[Redacted] gives me advice and shows me how to manage my time.”



## *CSUN Faculty Interaction: Challenges*

- Two students shared challenges with CSUN faculty mentor interaction, likely reflecting isolated events or special circumstances
  - “The advising from the faculty is not good. That’s the only time I would interact with them but I get my information from other friends or my peer mentor. Don’t really speak on a personal level.”
  - “My faculty mentor left. They don’t know me by name. I see them but they don’t speak to me.”



## *Peer Interaction at GCC*

- GCC cohort participants recorded interactions with GCC and CSUN peers that facilitated “opportunities to apply science to real life.”
  - Monthly meetings, leadership retreat, field trips to JPL-NASA, JBL/Harmon, Burbank Water facility
  - Internships at CSUN with CSUN faculty, students
    - Student: “less anxious to be the only person in the lab.”



## *Effects of Peer Tutoring at CSUN*

### **Peer tutors offered a learning support system**

- “They helped me to study for this one class I was having problems with.”
- “The peer tutors are good, they know the subject matter and help me especially before tests.”
- “I meet with my peer tutor and mentor 3-4 times a week. He gave me tips on the program, classes.”
- “Having had the need for a tutor...for me to find someone who knows my subject.”



## *CSUN Peer Mentoring as Student Support*

- Cohort participants found a support system in their mentors that served to guide them through their transition to CSUN, through programs
  - “My peer mentor helped me to navigate things”
  - “I like my mentor, he is a Masters’ student and he knows a lot.”
  - “I was glad to be working on the same team as seniors, I could see progress.”



## *Effects of Peer Interaction at CSUN*

- Mitigate student transfer experiences
  - “I still see my friends from GCC and we have some classes together.”
  - “I like working with the same students in my [redacted] group and research group.”
  - “I now have friends I can meet...and study with.”
- Facilitate academic self-confidence
  - “My mentor helped me to turn into a self-starter and to ask for help.”



## *Challenges of Peer Interaction at CSUN*

- Several students seemed to avoid the key peer interaction activities of peer mentoring/tutoring
  - “We really don’t use the peer tutors or mentors. We work together in groups to try to help...out.”
  - “If they are in my classes and I know them from AIMS, then we might talk, but not really.”
  - “They haven’t changed me ...I don’t see them as structured interactions.”
  - “I have...little to describe...I didn’t meet with them.”



## *Qualitative Measures: Interpretation*

- What appears to affect student learning and career development is consistent, frequent interaction with faculty mentors
  - The activities that facilitate interaction matter if meaningfully connected to coursework and career
- Peer tutors/mentors tend to enhance student academic/social experiences, support learning



## *Recap: Conclusions on Performance*

- In general, advising, workshops, labs, and faculty research are project strengths
- Overall, student-faculty interaction tends to have the strongest effects on student experiences
- Finally, peer interaction in the form of peer mentoring and tutoring appear to have strong, positive effects on student transitions, learning



## *Overall Project Focus Areas*

- Increase number of advising sessions with GCC/COC cohort participants = faculty mentor roles
- Consider coordinated efforts for COC/GCC students to be peer mentored by CSUN students
- Explore alternatives to online courses: webinars, talks via Collaborate, Moodle discussion forums
- Examine ways to nudge up peer tutoring



## *Next Steps*

- Data collection/analysis with Cohorts 2/3
- Update program monitoring tools at CSUN
- Inferential statistical analyses to examine program participation and outcomes at CSUN
- Exploratory studies on effects of research participation and experiences of students of color in engineering/computer science
  - Interaction with gender and race/ethnicity identity



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## *Meeting Calendar for Summer-Fall 14*

- Summer meeting w/External Advisory Committee – *June 12<sup>th</sup>, 2014*
- *September 18<sup>th</sup>, 2014*
- *October 16<sup>th</sup>, 2014*
- *November 13<sup>th</sup>, 2014*
- *December 11<sup>th</sup>, 2014*

**\*All meetings above are scheduled from 2 PM – 4 PM in JD 1568.**

**\*Note: Fall 2014 Tech Fest – September 23<sup>rd</sup>, 2014**



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