

INDUSTRY ADVISORY BOARD MEETING MINUTES

June 8, 2011

Chair – Brianna Lutes of Infrastructure Engineering Corporation

Host / Vice Chair – Maria Charles of Hamilton Sundstrand

I. Welcome & introductions

The June 8, 2011 San Diego MESA Alliance (SDMA) Industry Advisory Board (IAB) meeting was called to order at 1:10 pm by B. Lutes. B. Lutes thanked M. Charles for providing food and for hosting the meeting at Hamilton Sundstrand.

Members present

Name	Company	Phone	Email
1. Al-Jafri, Abu-Bakr	Caltrans	619	IAB and guest contact information is private. For questions and comments, please contact any MESA Alliance staff member.
2. Alvarez, Rafael	San Diego City College MESA	619	
3. Bakhiet, Raga	Southwestern College MESA	619	
4. Camerino, Edgar	Rick Engineering Company	619	
5. Charles, Maria	Hamilton Sundstrand	858	
6. Chavez, Thelma	SDSU Maximizing Sci. Potential	619	
7. Galeana, Daisy	Solar Turbines	619	
8. Garcia, Theresa	SDSU MESA Engineering Prog.	619	
9. Jimenez, Oscar	Solar Turbines	619	
10. Lutes, Brianna	Infrastructure Engineering Corp.	858	
11. Pamintuan, Eric	SPSD/MESA	619	
12. Sheridan, Phillip	Bio4Front Inc.	858	
13. Yang, Angeline	SPSD/MESA	619	
14. Zelkind, Lisa	Sempra Energy – SDG&E	858	

Guests present

Name	Affiliation
1. Escalante, Emily	SDSU MESA Engineering Prog, 619
2. Perez, Jeri	NAVAIR 858
3. Schultz, Josiah	Rick Engineering Company 619

II. Review & approval of minutes

A motion to approve the April 13, 2011 meeting minutes was made by T. Chavez and seconded by M. Charles; the minutes were then approved. B. Lutes noted that past meeting minutes can be found online at <http://alliance.sdccmesa.com>.

III. SDMA pipeline spotlight: Graduates & scholarship recipients

E. Escalante introduced herself as a second year Mechanical Engineering major in the SDSU MESA Engineering Program (MEP). She was a recipient of a 2011 MESA Scholarship, has shadowed engineers at NAVAIR (Shadow Day) and has had MESA pre-college students shadow her as well (Jr. Shadow Day). MESA offered her valuable industry networking opportunities and exposure to other engineering majors regionally. The stipends and scholarships she earns will help her continue her studies in engineering as it is an expensive major with the constant technological updates and to add to her savings to possibly study abroad.

J. Schultz recently became an MEP alumnus having graduated in May. He participated in Shadow Day at Rick Engineering Company in 2009 and participated in the Summer Team Internship program with Kathy Haynes at Kennedy Jenks in 2010. The industry exposure that MESA provided was his most valuable experience from the program, as just getting a foot in the door was difficult. Shadow Day confirmed that

Civil Engineering was indeed the major he should be in and the internship pushed his motivation to graduate in his field.

J. Perez is an MEP alumna, having graduated in May 2010 in Aerospace Engineering. She participated in the Summer Team Internship program in 2009 with NAVAIR. The internship was crucial to her because it confirmed that NAVAIR was the company she wanted to work for. Although NAVAIR did not have any openings when she graduated, she kept in contact until there were openings and she is now currently employed by NAVAIR. Her first real engineering experience was with the Walk on Water Competition. She attributes receiving stipends as helping her to reduce her work load which allowed her to concentrate more on studying. She will be applying to a masters program in fall 2012.

T. Garcia explained that the three presenters received one or more participation stipends during their time as MEP students. Participation stipends are awarded to the top 40 active students each academic year by funds provided by the National Science Foundation (NSF) STEP grant.

IV. **Focus topic: Development**

- A. **SDMA brochure** – R. Alvarez thanked the IAB for their input and L. Zelkind for printing first copies, which were distributed to attendees at the SDG&E Engineering & Technology Expo in May. Both M. Charles and L. Zelkind volunteered to print additional copies after the NSF grant numbers are added to the brochure.
- B. **Results of California Space Grant Consortium (CaSGC)** – The intent of this NASA funded grant was to get more students interested in STEM and an eventual NASA-type career. A \$1,500 stipend at 1,200 hours was given to a student at SDSU, City College, and Southwestern College to conduct research with SDSU Aerospace Professor Dr. Jacobs and his graduate student. The three students were also tasked with conducting outreach to D. Goyer's MESA Schools Program (MSP) middle and high school students; chaperoning them to the Ruben H. Fleet Learning Center to participate in the 'be an astronaut for a day' activity. The grant was just a pilot and the team hopes to work again on a larger version of it.
- C. **New NSF STEP grant** – The current NSF STEP grant ends September 2012. It is STEM focused based on enhancing the MESA model; increasing student participation, student retention, graduation rate, number of internship, research, and post-grad opportunities. The Summer Team Internship program is available to pay intern stipends on behalf of the companies because of this grant. It is the intent that companies see the value of MESA students through these internships.

Although the MSP's are not a part of the current NSF STEP grant formally, they partake in activities as part of the SDMA. The SDMA is working on a new NSF STEP grant that will formally include the MSP's in San Diego and Imperial Valley. It will introduce a summer bridge and formal mentoring program, as well as emphasize the 2,200 MESA students that the SDMA pipeline works with.

'Expanding Underrepresented Minority Participation: America's Science and Technology Talent at the Crossroads' identify five proven strategies for minority student success in STEM. Currently MESA addresses three of those five. The remaining two are the summer bridge and mentoring programs that the new proposal will address. SDMA will ask for letters of support from industry to submit along with the new grant proposal.

- D. **University of Washington Engineering Research Center (ERC)** – was accepted for funding. It is a \$20 million dollar grant that involves MIT, SDSU, and other partners, such as Southwestern College. The research involves sensorimotor neural engineering. The goal is to help wounded soldiers through prosthetics and integration into the nervous system.

V. **SDMA upcoming events**

- A. **NSF/MESA Summer Team Internships** – is now in its fourth year. The NSF grant allows for a total of 36 student interns, 12 from each partner campus. Each student receives a \$1,250

stipend for 100 hours. The LIPP Foundation provides additional funding to Southwestern College interns as they have additional requirements on their end. 30% of companies have kept interns past the contracted 100 hours. Beyond the 100 hours some interns either volunteer or the companies have chosen to pay them. Please note that there can be certain liabilities involved with volunteers, see the Fair Labor Act as reference. IAB will be invited to the summer team internship reception on August 2, 2011 at the SDSU Parma Payne Goodall Alumni Center, regardless if the company hosted an internship. The reception will consist of open networking, poster presentations by interns, and h'orderves.

- B. **Industry feedback** – A. Yang opened up discussion on interviewing for internships, student disclosure, and internship job evaluations. IAB suggested that MESA provide pictures as recommendations for particular companies, as some students have shown up to interviews in business casual attire when the interviewer is seeking more formal attire. Students also need to be responsive and return phone calls and/or e-mails in a timely manner. Also, students need to ask more questions during the interview. A. Yang explained that professional development activities such as the Northrop Grumman hosted Mock Interview and Resume Critique Workshop are sprinkled throughout the academic year for continuous training.
- C. **San Diego Region Joint Planning Conference for Engineering and Science Chapters hosted by Raytheon** – will take place on August 5, 2011, from 8:00 – 4:00 pm. Student diversity engineering and science organization officers from SDSU, UCSD, USD, San Diego City College, and Southwestern College will be invited. Last year, Congresswoman Susan Davis was in attendance and spoke about the importance of the STEM field. T. Garcia thanked Brett Balazs and Phong Bach for their facilitation. Raytheon plans to conduct another diversity theater skit again this year.

VI. **SDMA past event recaps**

- A. **Olympics & Robotics Challenge** – R. Alvarez reported that over 80 MESA students came away with experience, competitiveness, camaraderie and suggested more ideas for 2012. He thanked Jeri Perez of NAVAIR and Maria Charles of Hamilton Sundstrand for their volunteerism. M. Charles donated twelve 8GB USB flash drives and twelve \$10 iTunes gift cards as prizes.
- B. **End of Year Celebrations**
 - **SDSU MEP/MSP** – Graduation & Scholarship Reception was held at the new Parma Payne Goodall Alumni Center as Aztec Center is being renovated. T. Garcia thanked Rick Engineering Company, Kyocera, Northrop Grumman, Goodrich, Sempra Energy/SDG&E, Hamilton Sundstrand, Brianna Lutes, and PG&E for their scholarship donations. Although PG&E is in the bay area, they see the value in San Diego MEP/MSP students.
 - **San Diego City College MESA** – Family Open House & Awards Ceremony joined MESA staff, students, and their families before they separated towards the campus commencement ceremony. The MESA program saw 41 students transfer this semester where the trend is usually in the 20's.
 - **Southwestern College MESA** – Awards Ceremony also saw the highest number of students transfer out as well. Out of 20,000 students, 3 MESA students received high distinction scholarships. Another student received the Department of Defense \$24,000/year SMART scholarship which follows the student throughout their academics.
 - **San Diego MESA Schools Program** – Awards Banquet & Senior Recognition Ceremony was held at the Balboa Park Club Ballroom.
 - **Imperial Valley MESA Schools Program** – Admittance Reception was held at the SDSU Imperial Valley campus. B. Lutes added that Director Jeanette Ramos Espino's MESA program is in almost every middle and high school in Imperial Valley.

VII. MESA program key updates

- A. SDSU MEP/MSP** – saw their largest number of graduates from the program, at 45 students. The entire College of Engineering also saw an increase in their number of graduates as well, at 500 students. M. Charles spoke on behalf of alumni at the commencement ceremony. For the 2011-2012 academic year, MEP/MSP will be accepting 80 new students after dropping students not participating and graduates. The program will have 320 total students, which includes the 10% increase required by the NSF grant.
- B. San Diego City College MESA** – distributed bookmarkers and handouts that detail the victim/creator philosophy, the secret to success, and the Academy for STEM Success; an incoming summer bridge program which was expanded to include students one year out of high school.
- C. Southwestern College MESA** – was awarded a \$10 million grant that allows 3 students to receive laptops in exchange for educating community members in digital literacy. The students will train to receive a certificate from Microsoft. The IAB suggested that R. Bakhiet not just focus in Chula Vista but try going to outside adult centers and assisted living centers as well. Southwestern College is one of the few area community colleges that will be offering summer school.

VIII. Other topics

- A. IAB agenda building** – M. Charles will host future IAB meetings with the exception of August 10. If Hamilton Sundstrand is not available, IAB meetings will be held at Infrastructure Engineering Company. This decision was to encourage more industry attendance as the location is more central to companies in San Diego compared to Poway. Please e-mail E. Pamintuan for topics to be added to the agenda and for any snack preferences. The August IAB meeting focus topic will be on planning and student organization presentations.
- B. Company announcements** – Infrastructure Engineering Corporation’s proposal with the City of San Diego on a major water pipeline project was accepted which will employ their entire water department to construct 5 ½ miles of pipeline. The project will begin in fall.

IX. Adjournment

The formal meeting adjourned at 3:11 pm. Minutes submitted by E. Pamintuan on July 27, 2011.

NEXT MEETING:
Wednesday, August 10, 2011
1:00 – 3:00 pm
San Diego State University*
Engineering Building, Room E423B
5500 Campanile Drive
San Diego, CA 92182

**Please note the August meeting will take place at SDSU,
and not at Infrastructure Engineering Company or Hamilton
Sundstrand.*