



AGENDA

STEM-H Advisory Board Meeting

Thursday, February 13, 2020

1 to 3 pm

Learning Resource Center, Rm 101

Facilitator*Glenda Kodaseet, Communication and Outreach Specialist, R²S²*

In October, following our previous Advisory Board meeting, we began meetings with the Facebook Data Center in Los Lunas and are excited to have them joining us today as our guest presenters.

Welcome by Dr. Alice Letteney, Chancellor

The UNM-Valencia Title III STEM Grant for Hispanic Serving Institutions (HSIs) actually expired for new applicants and renewals on September 30, 2019. Chancellor Letteney was honored to be part of a “fly-in” where she and other minority-serving institution leaders flew into Washington D.C. to advocate for the continuation of these grant programs. This effort was organized primarily by Historically Black Colleges and Universities (HBCUs) and the Thurgood Marshall Foundation. UNM-Valencia was the only institution represented in the group who currently had a Title III STEM-HSI grant.

- The Title III STEM Grant was the largest grant that the UNM-Valencia campus has ever received at \$4.9 million.
- Chancellor Letteney was thrilled to tell the Board that the “fly-in” efforts were successful.
- The new grant opportunities will be funded at \$255 million a year for all minority-serving institutions, and HSIs will have \$100 million of that dedicated to the Title III STEM grant programs.
- Chancellor Letteney is hopeful that UNM-Valencia will be eligible to apply for the grant again.

Chancellor Letteney stated “I want to thank each of our board members for taking the time to be here and partner with our campus. We know that you are going to be the ones who help our students get jobs, help our students stay in New Mexico, and be productive citizens, and for that we are grateful for your support.”

Roll Call/Introductions (all in attendance)

- Rodney Wright, Assistant Superintendent, Belen Consolidated Schools
- Hank Vigil, Director of Student Affairs, UNM-Valencia
- Dr. Alice Letteney, Chancellor, UNM-Valencia
- Veronica Salcido, Sr Program Manager/Director, R²S², UNM-Valencia
- Dr. Laura Musselwhite, Dean of Instruction, UNM-Valencia
- Johnna Chapman, Site Coordinator, Facebook, Los Lunas, NM
- Chisom Ajalo, Workforce Development Co-Op Program Manager and Facility Operations Site Startup, Facebook, Menlo Park, CA
- Oscar Venessee, Operations Program Manager- Diversity, Facebook, Menlo Park, CA
- Victor French, Undergraduate Research Coordinator, R²S² & Lecturer II of Science, UNM-Valencia
- John Bollweg, Institutional Researcher, UNM-Valencia
- Laura Bittner, Valencia County Cooperative Extension Services - Los Lunas, NMSU

- Rosa Auletta, Principal Investigator, Title V Next Generation, UNM-Valencia
- James Hart, IT Program Coordinator and Faculty, UNM-Valencia
- Sarah Clawson, Career Services, Manager, UNM-Valencia
- Brian Smith, Engineer, Sandia National Labs

Facebook Data Center Co-Op Special Presentation (UNM-Valencia and Facebook Internship Program for Students)

- *Johnna Chapman*, VLL Site Coordinator, Facebook, Los Lunas, NM
- *Oscar Veneszee*, Operations Program Manager- Diversity, Facebook, Menlo Park, CA
- *Chisom Ajaelo*, Workforce Development Co-Op Program Manager and Facility Operations Site Startup, Facebook, Menlo Park, CA

The Facebook Co-Op program is designed to support initiatives to expand workforce development in local communities where data centers exist. It has moved away from an intern program to a co-op program in order to give students a more personalized learning experience. Facebook is still in the pilot phase of the co-op program and currently running two pilot programs:

- Los Lunas, NM
- Altuna, Iowa

The Co-Op program hires a total of 16 students as short-term employees. There is no hiring requirement like that of an internship program. This allows Facebook to pay students for 8 weeks and give them an incredible learning experience in all of the various aspects of Facebook and the Data Center.

Facebook's goal with the Co-Op is to foster a community program to connect with schools, and at this point, it has moved into more of an *Ambassador* role. Students are flown to Facebook Headquarters in Menlo, Park, California, for a week-long orientation, which helps them feel a part of the Facebook team, and then they move on to complete the 8-week Co-Op, becoming *ambassadors* for our Data Centers in their own communities.

What is a data center? Simply put, a data center is a big building with servers tracking and holding important digital information. It is a secure facility built to ensure your information stays safe. The Village of Los Lunas Data Center (VLL Data Center) has not only brought job creation, but also provided community grants, making it a point to invest in the local economy through programs like the Co-Op.

In Summer 2019, the VLL Data Center accepted 8 Central New Mexico Community College (CNM) students for the first pilot. The program ran for 8 weeks and by the end, 4 CNM students were hired on and are currently working in their field at the VLL Data Center. Our goal is to expose students to the Tech Industry, we don't focus on where students decide to work, such as Google, Amazon, etc., as we consider it a win for students to get the experience needed to enter the workforce in their area of interest.

After feedback from the first pilot, we will host students for 10 weeks. The curriculum of the program is as follows:

Week 1: New Employee Orientation at Facebook Campus in Menlo Park, CA.

Week 2: Orientation at VLL Data Center, introductions to each department, review goals and expectations, and do online trainings, all of which will help the students feel comfortable with staff/employees, the work environment, and the expectations of program.

Week 3: ICM is the general contracting team. These are Facebook employees which help manage the construction contract. Students will go out into the field, learn about the design and construction of center buildings, learn about cost, controls and budgeting, and review case studies, etc.

Week 4: DCC-Data Center Connectivity. These are Facebook employees that put all of the cables together at the Data Center (you can only imagine how many there are!) This includes field time, job shadowing, and class time.

Week 5: Mechanical Week. While students do get a lot of learning in college, the next three weeks cover a deep dive of industry specific learning geared towards different areas of the Data Center.

Week 6: Electrical Week. This includes networking with Facebook and all vendors on site and meeting with mentors weekly.

Week 7: Controls Week with Site Operations. Students are exposed to, and interact with, the team who manage actual servers.

Week 8: Logistics. Students are exposed to, and interact with, the Logistics Team who manage all of the moving pieces at the Data center.

Week 9: Interest-Specific Job Shadowing. Via feedback from the last group of students who did not have enough time in the 8 week program for job shadowing in their area of interest, 2 weeks have been added to the current Co-Op of 10 weeks.

Week 10: The last week is prep for student presentations focused on what they have learned in the program, which includes soft skills, real work experiences, resume building, and team work.

Co-Op Student Video: <https://youtu.be/2OsWgleVbFw>

- This year's program includes 3 students from UNM-Valencia, 3 CNM students, 2 Ace High School students, and 1 Century High School student.
- Facebook and Fortis are working with ACE High School to recruit and impact students early. One of the feedback sessions from the first pilot indicated that students would have liked to participate in the program earlier in their academic career.
- What's next? Our second cohort will begin on Feb. 18th, 2020. Students will spend first week in Menlo Park, California, at the Facebook Headquarters.
- We are not doing a Summer 2020 program in VLL, but will focus on a Summer 2021 program.
- There is no preference regarding student majors. We want students to get the idea of what is offered, thus, the Co-Op is open to any student who is responsible, hardworking, and committed to learning.
- This cohort will be comprised of 3 female students, an increase from 1 female student in the previous pilot.

Update on STEM Activities by Veronica Salcido, R²S² Director, and Glenda Kodaseet

Transfer Events

- Hosted 5 "Walkabouts" or campus visits/tours in Fall 2019 to the UNM-Main Campus, N.M. Tech in Socorro, and NMSU in Las Cruces.
- Rebranded Transfer Tuesday events, which invites recruiters to UNM-Valencia to meet with students considering transfer. New Sophomore Success Day was hosted on February 7, 2020 with 42 students in attendance. The event included staff and faculty representatives from UNM-Main, N.M. Tech, and NMSU.

Financial Literacy Study

- Continuing year 4 of a 5-year research study on Financial Literacy Coaching for at-risk STEM-H students, which allows for one-on-one coaching sessions and text nudges aimed at reducing students overall educational-related debt.

Undergraduate Student Research Program

Students in the Undergraduate Research (UGR) Program will be traveling to Bozeman, MT, to present their research at the National Conference on Undergraduate Research at Montana State University.

- The UGR Program is comprised of 2 additional courses, which students can register for:
 - Research Methods Class and the Undergraduate Research Topics Class

STEM Exploration Activities – September 2019 to March 2020

- STEM Speaker Series – Wednesdays from 4 to 5 pm
 - September 4 – **Dr. Scott L. Collins**, Associate Director of UNM Sevilleta Field Station and Distinguished Professor, UNM Department of Biology - **21 attendees**
 - October 2 - **Matt Fetrow**, Director of the Tech Engagement Office at the N.M Air Force Research Laboratory - **15 attendees**
 - November 6 - **Dr. Emile A. Nakhleh**, Director, Global and National Security Policy Institute, UNM-Main - **14 attendees**
 - November 20 - **Dr. Marisa Thompson**, NMSU Extension Horticulture Specialist Los Lunas Agricultural Science Center - **14 attendees**
- UNM-Alumni STEM Student Success Speaker Series – Tuesdays from 4:30 to 5:30 pm
 - February 4 - **Irene Lente**, 6th Grade Science Teacher and Robotics Team Advisor, Los Lunas Public Schools.
 - Scheduled for March 3 – **Salomon Garcia**, Process/Research and Development Engineer, Sandia National Laboratories.
- Field Trips
 - Friday, October 18 - Tour of N.M. Air Force Research Laboratory (AFRL) coordinated by Ronda Cole Harmon, Director, AFRL NM STEM Outreach. **11 students** toured and engaged in dialogue with the following labs and scientists:
 - Thermal Systems Lab – *Researcher Jonathan Allison*
 - Deployable Structures Lab – *Researcher Capt Christopher Box*
 - Spacecraft Charging and Instrument Calibration Lab (SCICL) – *Researcher Dr. Daniel Engelhar*
 - AFRL Maker-Hub – drives innovation and discovery
- BioBlitz – outreach included K-12 students – Wednesday, September 25
This event exposed students to biology. **A total of 71 students participated.** The event included a scavenger hunt created by *Dr. Ben Flicker, Assistant Professor of Biology*, which had students finding plants, trees, and leaves around campus in order to answer 10 questions. Students could create a clay imprint in the ceramics studio of a found object with the help of *Instructor Janice Pacifico*. Participating students were eligible for 4 \$250 scholarship drawings.
- Mole Day – outreach included K-12 students - Wednesday, October 23
Mole Day Celebrates Chemistry and Avogadro's Number, 6.02×10^{23} , a basic measuring unit in chemistry. **This event exposed 26 Los Lunas Middle School students and 70 UNM-Valencia students to chemistry.** *Dr. Jerry Godbout, Assistant Professor of Chemistry*, and his chemistry students conducted chemistry experiments which included hands-on activities for students. The UNM Center for Water and the Environment brought out 4 water experiments.



- e-Day Celebration – Thursday, February 6
This event celebrated math and the mathematical constant $e = 2.71828182845904523536\dots$. It exposed students to math through a scavenger hunt coordinated by math faculty. Students had to find math faculty located in 5 areas across campus who gave individual and student teams 1 math problem to solve (5 problems total). Students competed for gold, silver, and bronze medals.

UPCOMING STEM-H Events for the Spring Semester

- Earth Day Celebration – includes K-12 students - Wednesday, April 22
An annual celebration, the STEM League Student Club (STEM League) will grow plants, herbs and flowers in the UNM-Valencia Greenhouse and sell as part of UNM-Valencia's Earth Day Celebration. Other Earth Day activities included baking solar oven cookies, having 2 portable planetariums, and 10 hands-on activities for K-12 and UNM-Valencia students.
 - o 5 Belen and Los Lunas Schools Confirmed to Participate for a total of 287 – 277 students and 10 teachers representing K-12 students.
- Los Lunas Community Clean-Up Day with STEM League Student Club – Saturday, April 18
The STEM League Student Club signed up for the clean-up as a service activity, and will serve as recruiters to engage UNM-Valencia faculty and staff in the community clean-up event. Students are working with Joshua Chavez, Solid Waste Division Assistant Supervisor for the Village of Los Lunas, who was in charge of the community clean-up event.
- Undergraduate Research and STEM Day – includes K-12 students - Monday, May 4
Co-sponsored with Los Lunas Facebook or VLL Data Center, this event will expose high school juniors and seniors and UNM-Valencia students to STEM fields of study. Lunch is included with the following activities planned:
 - o interacting with research faculty and students
 - o exploring science and research labs
 - o seeing demonstrations and technology
 - o participating in STEM hands-on activities
 - o a mix and mingle with staff and faculty
 - o learning about Los Lunas Facebook Co-Op and STEM career paths
 - o A total of 180 students and 7 teachers are confirmed to participate.

Meeting Adjourned – a tour of The Learning Center and the STEM-H Center (tutoring services) located in the Learning Resource Center were provided to members.

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