

LaSTEM ADVISORY COUNCIL MEETING NOTES
July 18, 2018
10:00 a.m.

The LaSTEM Advisory Council met in session at 10:07 a.m., Wednesday, July 18, 2018, in the Thomas Jefferson Room, Claiborne Building, 1201 North Third Street, Baton Rouge, LA. Co-chair Susie Schowen called the meeting to order.

Committee Members/Representatives Present

Susie Schowen, Co-chair
Trisha Fos
Michael Gaudet
Crystal Gordon
Amanda Hill
Jeff Holcomb
Cavick Inabnett
Jeannine Kahn
Jada Lewis
Stanton McNeely
Janet Pope
Phoebe Rouse
Kellie Taylor-White
Ken Tucker
William Wainwright
John White
Jaime Williams
Laura Younger
Tom Yura

Committee Members Absent

Kim Hunter Reed, Chair
Sharon Hewitt
Mahyar Amouzegar
Larry Carter
Patty Glaser
Stephanie Hilferty
Calvin Mackie
Kristen Reeves
Scott Stevens
Rachel Vincent-Finley

Staff Members Present

Vernon Dunn
Lupe Lamadrid
Jill Holton
Brittany Francis

I. WELCOME AND ROLL CALL

Vernon Dunn, Louisiana Board of Regents (BoR), conducted roll call and established a quorum.

II. OLD BUSINESS AND UPDATES

Dr. Dunn asked for approval of the June 2018 meeting of the LaSTEM Advisory Council.

On motion of Ken Tucker, seconded by Stanton McNeely, the Committee voted unanimously to accept the minutes from the June 2018 meeting of the LaSTEM Advisory Council.

Dr. Dunn provided an update on the LaSTEM Summit to be held at Pennington on September 7, 2018. He stated that invites are still being sent, and approximately 300 people are currently registered to attend.

Dr. Dunn discussed the schedule and frequency of upcoming LaSTEM Advisory Council meetings, and indicated that the last meeting will be in August 2018 before meeting again in November 2018. Any new scheduled meetings will be at the discretion of Dr. Kim Hunter-Reed, Chair, and Senator Sharon Hewitt.

Susie Schowen, Louisiana Department of Economic Development (LED), elaborated on her visit to the Science and Technology Summit at the White House in Washington, DC, and stated she was impressed with the Summit speaker. She stated she learned new strategies that can be applied to Louisiana's STEM initiatives.

III. STEM SHOWCASE: NASA

Visiting from NASA were Lionel Dutreix, Deputy Chief Operating Officer, Kristy Brumbfield, STEM Director, and Jude Guidry, Photographer. Mr. Dutreix presented a fascinating slideshow containing graphics of NASA's Michoud Assembly Facility in New Orleans and NASA's Rocket Factory.

Mr. Dutreix provided history on Appollo, Saturn, and the Shuttle eras. Michoud is one of the largest factories in the world at 2.2 million square feet on 832 acres. The workforce is comprised of a vast array of manufacturing skills and diverse skill sets required for fabrication of barrels and rockets. Michoud's facility contains many tenants and partners, such as NASA, USDA, State of Louisiana, NCAM, Boeing, Louisiana State University, University of New Orleans, Blue Origin, Textron, Lockheed Martin, B-K Manufacturing, Advanced Cutting Solutions, and more. After a continuum of having to pull people from other areas of the corporation with unique skill sets, Michoud has now partnered with local community colleges in

Louisiana to meet workforce needs exclusive to NASA programs and manufacturing. Ken Tucker, Boeing Corporation, stated that approximately 600 people have participated in partnering programs between Nunez Community College, other LCTCS schools, and Boeing. The Alliance for Minority Participation (AMP) allows for research in engineering, electronics, computer software, aeronautics, and more. William Wainwright, Northshore Technical Community College (NTCC), stated that NTCC and Delgado Community College are anticipating joining the partnering initiative after Louisiana Board of Regents approved this initiative at its June 2018 meeting. Laura Younger, Baton Rouge Community College (BRCC), mentioned that several of her students had successful internships at various NASA sites, including Michoud.

Mr. Dutreix stated that Michoud has a national impact of 6,000 jobs, and an economic output of \$830M. It supports more than 5,000 jobs in Louisiana and Mississippi with \$620M in economic output. Michoud's vision is the following: **“To discover and expand knowledge for the benefit of humanity.”** Michoud's mission is the following: **“To enable human expansion across the solar system.”** Michoud partners with the following facilities: (1) Marshall Space Flight Center, Huntsville, AL at Army Redston Arsenal (6,000 employees); (2) Kennedy Space Center, Cape Canaveral, FL; (3) Stennis Space Center, Bay St. Louis, MS; and (4) Johnson Space Center, Houston TX.

Mr. Dutreix continued his presentation by describing the complexity of transporting massive rocket components. He introduced the audience to Pegasus—a large barge used since 2000 to transport space equipment by waterway.

Dr. Ken Bradford, Louisiana Department of Education (LDoE), asked Mr. Dutreix how many applications Michoud receives when positions are posted and advertised. Mr. Dutreix answered that Michoud receives approximately 100 applications, internally and externally.

Stanton McNeely, Louisiana Association of Independent Colleges and Universities (LAICU), asked if Michoud's tours are designed for other age groups. Mr. Dutreix explained that while Michoud is pushing for more public tours and school attendance, they are still working to design tours exclusive to age and academic level, particularly groups exclusive to high school students who are considering careers in STEM-related fields. Additionally, they are planning to create framework for teacher professional development and programs for children ages 8-10.

Dr. Wainwright mentioned that Dr. Renee Horton is a Rocket Scientist with NASA, and she indicated to him, in a previous conversation, that the value of technicians and federal advocacy should always be emphasized.

Ms. Younger and a representative from River Parishes Community College (RPCC) both stated that their students had the incredible experience of participating in NASA's Balloon Launching Technology project, and they were greatly impressed with the impact the program had in inspiring their students to pursue STEM-related courses of study. Ms. Schowen added that students should always continue to be inspired and not pushed into STEM-related fields.

IV. HIGH SCHOOL – POST SECONDARY SUBCOMMITTEE UPDATES

Dr. Lupe Lamadrid, Academic Affairs, BoR, began her presentation by identifying three SMART Objectives for Louisiana:

1. Collaborate with postsecondary institutions in the creation of high quality STEM pathways programs such as the Environmental Protection and Sustainability Graduation Pathway and the LSU Pre-Engineering Certification Pathway programs aligned to the needs of Louisiana's future economy/
2. Increase collaboration and support with postsecondary institutions to build on existing intensive instructional summer programs for students and teachers in STEM foundational courses. These include boot camps for engineering, biology, and physics, etc., which would take place prior to the start of the student's enrollment at the postsecondary institution. These boot camp programs will provide concentrated exposure to foundational courses at the postsecondary level. These programs can, in the future, be expanded to include opportunities for students at the secondary level who are interested in STEM fields.
3. Collaborate with the Board of Regents and LDOE in the development of the STEM diploma endorsement to recognize those students who take additional STEM courses beyond those required for secondary graduation. This initiative includes identifying existing and potential courses to be classified as STEM and considered for meeting diploma graduation requirements, BoR core, TOPS, and additional weight (similar to AP, Honors, and Dual Enrollment).

Dr. Lamadrid identified the following STEM Classification of Instructional Programs (CIP) codes shaded in light brown. The light brown shading represents **current** classifications. (See attached.)

- ❖ Computer and Information Sciences and Support Services
- ❖ Engineering
- ❖ Engineering Technologies and Engineering-related Fields
- ❖ Biological and Biomedical Sciences
- ❖ Mathematics and Statistics
- ❖ Physical Sciences
- ❖ Science Technologies/Technicians

Dr. Lamadrid then identified the following STEM Classification of Instructional Programs (CIP) codes shaded in light blue. The light blue shading represents STEM classifications **to be considered**. (See attached.) She sought feedback from the Council, and Ms. Schowen and other Council members raised apprehension to some courses marked for STEM consideration.

- ❖ Agriculture, Agriculture Operations, and Related Sciences
- ❖ Natural Resources and Conservation
- ❖ Construction Trades
- ❖ Mechanic and Repair Technologies/Technicians

- ❖ Transportation and Materials Moving
- ❖ Health Professions and Related Programs

Dr. Bradford and Dr. Lamadrid stated that a workgroup consisting of staff from BoR and LDoE have been collaborating regarding the STEM diploma endorsement.

Dr. Bradford stated that a proposal is being drafted that includes the following:

- ❖ Links to the STEM Pathways and alternative options for students in schools that do not offer the STEM pathways
- ❖ Levels of endorsements to ensure more students have opportunities to earn an endorsement
- ❖ Ideas around how to link the endorsement to categories of STEM professions (i.e., environmental, medical)

Dr. Bradford indicated that the proposal will be brought to the LaSTEM Advisory Council in August, and a final proposal will be brought to the joint BESE meeting in the fall regarding the endorsement. A final proposal for courses that can count towards the endorsement will be brought to the joint BESE/BoR meeting in December, and implementation is contingent upon Regents and BESE approval.

Dr. Bradford explained that the first diploma should be available soon. Foiled seals will provide level of STEM academic achievement. The proposal makes the STEM diploma endorsement available to ALL students, including TOPS and non-public students. A plethora of STEM courses will be a part of the framework, and the seal will be indicative of a culmination of a bundle of STEM courses successfully completed.

Dr. Frank Neubrandner, Professor of Mathematics, Louisiana State University (LSU), made a public comment. He stated that the CIP code catalog does not provide true definition of initiative criteria, and asked the Council to consider allowing campuses to self-identify what these STEM courses are for each individual institution.

On motion of Kellie Taylor-White, seconded by Stanton McNeely, the Committee voted unanimously to allow campuses to self-identify STEM courses for each individual institution.

IV. OTHER BUSINESS, ADJOURN

Dr. Dunn stated that the next LaSTEM Advisory Council meeting will be held August 15, 2018 at 10:00 in the Thomas Jefferson Room, Claiborne Building.

There being no further business to come before the LaSTEM Advisory Council, the meeting was adjourned at 11:45 a.m.