

# OFFICIAL NEWSLETTER FOR SPONSORED PROGRAMS

Grambling State University

Grambling, Louisiana

2016-2017

## New Grant Funding Received

**M**ore than **1.34 million dol-**  
**lars of new grant funding**

(excluding Title III funds) was awarded to Grambling State University during the July 1, 2016 – June 30, 2017 time period. This new funding is a direct result of faculty and staff writing proposals in response to grant and contract solicitations issued by federal, state, and corporate entities.

Thirty faculty were recognized in April at the Faculty Senate's Faculty Appreciation Luncheon for their work in writing and submitting proposals to funding agencies during the 2016/2017 academic year. The proposals funded include projects that focus on



Eleven of the 30 Faculty recognized for writing proposals

research, academic programs, student scholarships and enhancing the technology infrastructure. Three of the projects were funded by the National Science Foundation. Examples of other funding agencies include the Louisiana Biomedical Research Network, AT&T, Louisiana Highway Safety Commission, and Delta Regional Authority. These funded projects support the

mission of the university.

They support increased opportunities for students to enroll at Grambling State University, the retention and graduation of students. Several projects will expand the training that students receive through the development of academic programs and/or through the ability of students to engage in research alongside of faculty.

## LA GEAR-UP Program Returns to Campus

During the Spring 2017 semester, a proposal that Dr. Jagggers wrote and submitted to the state of Louisiana (Board of Regents, Louisiana Office of Student Financial Assistance & LA GEAR-UP) for a GEAR UP Program was funded. The award was \$95,000.

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR-UP) is a U.S. Department of Education Program. The mission of the GEAR-UP program is to increase the academic achievement of low income students and their preparedness for success in a post-secondary education program.

Two Learning Camps were held on campus during the month of June.



LA GEAR UP Student displaying the Slime he made

Each camp was one week in duration and targeted rising 7th and 8th grade students who attend schools that have a LA GEAR-UP classification. These Residential Camps had a STEAM (Science, Technology, Engineering, Arts, and Mathematics) focus. Students

engaged in hands-on activities that were designed to enhance critical thinking, problem solving, and leadership skills. Participants had the opportunity to engage in career exploration. Financial literacy training was also provided. Recreational activities were infused into the program, including a field trip.

Dr. Loretta Walton-Jagggers, Curriculum and Instruction Professor, has served as a LA GEAR-UP Director for the program since the first award was made in 2005.

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## GSU Selected to Participate in NASA Swarmathon Competition

Grambling State University was selected to participate in the **2017 NASA Swarmathon Competition**. October 2016, Dr. Yenumula Reddy-Computer Science Professor-submitted an application to NASA for the **Virtual Competition**. Fifteen institutions were selected for this competition. GSU was 1 of 4 HBCUs selected.

Grambling State University Computer Science students developed search algorithms for **Robotic Swarms**. Swarmies are small programmable robotic vehicles that are equipped with sensors, web cam, GPS, and a Wi-Fi antenna. The Swarmie design mimics the anatomy of insects. They can be programmed to act alone or

be a part of a swarm. A swarm of 20 is reported as being able to travel the distance that the *Mars Exploration Rover Opportunity* traveled in 11 years, in **only 8 hours**.



Swarmie

Information regarding the competition indicates "The students are developing and

testing algorithms that could one day be used in NASA's Mission to Mars."

Robots are reported as being needed to collect materials (e.g. water, ice, minerals) that could be useful to astronauts.

Eight GSU students participated in the **Competition**. Students enhanced their programming and simulation of robot field skills by participating in this project. They are looking forward to the next competition.

## Entrepreneurship Workshops

Entrepreneurship Technical Assistance Workshops were held on the campus of Grambling State University on February 7 and 8, 2017. **More than 300** individuals were in attendance. The purpose of the workshops was to expand the number and success of minority owned businesses by targeting college students and members of the local community.

These workshops were possible as a result of an application that Grambling State University submitted to the Delta Regional Authority in May 2016 in response to a HBCU Entrepreneurial Ecosystem Initiative opportunity. On July 18, 2016 Delta Regional Authority announced that 6 HBCUs had been selected to participate in this pilot project. Grambling State University was one of the

institutions.

Topics covered during the two day Entrepreneurship Technical Assistance Workshops included navigating the business loan process, steps for establishing a business, accounting practices, and marketing strategies. These workshops were facilitated by local experts.

A panel discussion was held in which business owners shared with attendees their journey in establishing a successful business. These owners represented businesses classified as a non-profit, mortuary services, real estate, and a gift shop. Local, federal and state organizations highlighted resources that are available to entrepreneurs.

The technical workshops ended with a competition in which

students and members of the local community were able to *Pitch* their business ideas. Five students participated in this competition. The winner of the Pitch Competition was Larry Leonard II. The top 3 students were eligible to attend a workshop in February that was held at the Allen Entrepreneurial Institute (AEI) in Lithonia Georgia. Twenty students traveled to AEI for this workshop.



Student Pitch Competition Participants flanked by AEI and Delta Regional Authority Representatives

## Funding Received to Connect Campus to LONI

Grambling State University was awarded \$249,010 by the Louisiana Biomedical Research Network (LBRN) to facilitate connecting the GSU Campus to LONI (Louisiana Optical Network Infrastructure).

LONI will provide the university with access to High Performance Computing. This capability will not only support research being conducted on the campus, but will also support current & future

needs of the university that are non-research related, that utilize High Performance Computing.

LBRN submitted a proposal to the National Institutes of Health (NIH) to use carry-over funds for this project.

President Gallot's support of this project was instrumental in getting the funding request initiated and approved.

This construction project will connect the campus to LONI by linking to a connection that is located off of Interstate 20, approximately 4 miles from campus. Fiber Optic cable will be ran from this site to the GSU campus.



## Biodegradable Polymer Research Project Funded

At the beginning of the Fall 2016 semester Grambling State University received notice from the National Science Foundation (NSF) of a supplemental award to conduct research on **Biodegradable Polymers**. This project is an added component to the Center For Mathematical Achievement in Science and Technology (CMAST) program at GSU. The supplemental award is \$120,000 for one year, bringing the total funding received from the National Science Foundation for this second cycle of funding for CMAST to \$ 1,868,315. This supplemental award was possible as a result of STEM faculty preparing a competitive proposal.

The Biodegradable Polymer research project was initiated as a result of a senior research project that was designed for a Chemistry major. During the Fall 2015 semester a senior level student , Jefferson Ayika, met with Dr. Connie Walton and discussed his research interests in biodegradable polymers that are used in biomedical applications that include controlled drug release and implants. Walton designed a two semester project for this student that required him to make a series of polyesters and the characterization of their thermal behavior.

During the Summer of 2016 another senior level chemistry major, Niesha

Nelson, began studying the biodegradation properties of these polyesters by burying the polymers in soil



Jefferson Ayika

samples of varying moisture content. As this project progressed it became clear to Walton that to complete a comprehensive study of these materials it would require an interdisciplinary team.

A letter from the NSF was released in 2016 announcing a supplemental funding opportunity. The funding solicitation had a priority of enhancing the research infrastructure of Historically Black Colleges and Universities. Walton immediately thought about the Biodegradable Polymer project. She reached out to STEM faculty at GSU in Biological Sciences, Chemistry, and Physics to put together a team that could study every aspect of these polymers.

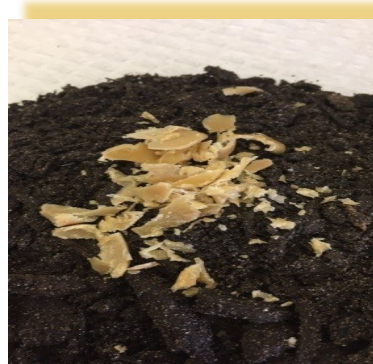
The components of the funded project are molecular modeling,

polymer synthesis, biodegradation studies, and characterization of the polymer structure before and after exposure to biodegradation conditions.

NASA-Glenn Research Center's Polymer Division will provide support in the characterization of polymer structures using Solid State Nuclear Magnetic Resonance. GSU faculty and students will travel to Cleveland Ohio and be there when the materials are analyzed.

Faculty participating in this project are Dr. Bobby Burkes, Dr. Frank Ohene, Dr. Pedro DeRosa, Dr. Connie Walton, Dr. Marilyn Franklin and Dr. Naidu Seetala.

The expectation is the *creativity* of this team will spur additional ideas that will expand the research infrastructure at Grambling State University and lead to additional funding.



Soil Study



## Social Work Faculty Member Receives Behavioral Health Award

November 2016, Dr. Elise Reed was notified that the application that she had prepared and submitted to the *Behavioral Health Curriculum Development Initiative* of the **Substance Abuse and Mental Health Services Administration** (SAMHSA) had been accepted. This award is being managed by the **National Technical Assistance Network for Children's Behavioral Health** (The TA Network). The TA Network is working to strengthen the training students receive in Masters of Social Work Programs. This initiative has the full support

of the Louisiana Department of Health/Office of Behavioral Health.

As a result of being selected, Dr. Reed will participate in extensive curriculum training. She attended the first *Summer Training Institute* on June 20-22nd in Baltimore MD on the campus of the University of Maryland. Dr. Reed will be infusing into the Social Work Curriculum specific information related to Behavioral Health for children and young adults. This curriculum develop-

ment will be done over a two year period. This award includes travel funds and a stipend.

Dr. Reed is an Assistant Professor of Social Work at Grambling State University since 2016.



Dr. Elise Reed

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## Project Funded that Targets Big Data

Grambling State University was awarded \$350,000 by the National Science Foundation in May 2017 to pilot a project that includes the implementation of a **Big Data Program**.

Big Data Analysis is a growing workforce need. The U.S. is projected to face a severe shortage of workers with skills in *big data analysis*.

*Big Data Analysis* is becoming more and more important to many fields. These fields include Human Resources, Homeland Security,

Engineering, Chemistry, Biological Sciences, Drug Development, Economics, Accounting, Marketing, Sales, and many others.

This pilot project focuses on developing and offering a series of **Big Data Analysis** courses that will be available to **all students** enrolled at Grambling State University. Two introductory level *Big Data courses* have already been developed by faculty in the Computer Science Department. The first course



will be offered during the Fall 2017 semester. An additional focus of the pilot project is specific STEM curricula will incorporate Big Data Analysis into certain courses to enhance student training.

The funded proposal was written by STEM faculty that included Dr. N. Seetala, Dr. S. Duhon, Dr. M. Ware, Dr. C. Walton, Dr. Y. Reddy, Dr. D. Hubbard, and Dr. P. DeRosa.

## Psychology Department Partners with Purdue University on Project

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Dr. Connie Walton

Grambling State University is partnering with Purdue University to implement a project that was funded during the Spring 2017 semester by the National Science Foundation. This project is titled *Identity Development Evaluation of African American Science Students (IDEAAS): A Longitudinal Investigation*. The research team will examine whether or not racial stereotypes affect the attitudes and beliefs of African American Students regarding their ability to succeed in a STEM (Science, Technology, Engineering, and Mathematics) career.



**STEM Major**

The team will also look at factors that buffer the effects of racial stereotypes.

African American Students enrolled in a STEM program at **Grambling State University, Purdue University** and **Louisiana Tech University** will be surveyed.

This research supports the development of models that can be used at the



**Dr. Stacey Duhon**

national level to increase the number of African Americans pursuing and completing a STEM undergraduate degree.

Prior to the National Science Foundation making the award, the involved universities' research protocols had to be approved by their internal Institutional Review Boards (IRB). This was a requirement since this project has research involving *Human Subjects*. Grambling State University's IRB reviewed and approved the protocol in May 2017.

Dr. Stacey Duhon, Dean of the College of Arts & Sciences and Psychology faculty, serves as a co-principal investigator for this project and will provide oversight for the GSU study.

Grambling State University received a sub-award of \$143,000.

Did you know that in a study commissioned by the National Science Foundation Grambling State University is listed in the top 50 of institutions that produced African American undergraduate STEM graduates who went on to earn a Ph.D. in a STEM discipline during the 2002-2011 time period?