BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 22, 2019

Item E.1. **Grambling State University's** request for review and approval of the University's
Mission Statement.

EXECUTIVE SUMMARY

Grambling State University (GSU) requests review and approval of the University's
Mission Statement. The Mission Statement established by GSU is reflective of the role, scope and
core values of the University and serves as a guiding principle. In accordance with SACSCOC's
Principles of Accreditation, the management board must review and approve an institution's
mission. As GSU prepares for the reaffirmation process with the accrediting body, consideration
of the Mission Statement is requested at this time.

RECOMMENDATION

It is recommended that the following resolution be adopted:

*NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the
University of Louisiana System hereby approves Grambling State University's request for review
and approval of the University's Mission Statement.*

GRAMBLING
STATE UNIVERSITY
GRAMBLING, LOUISIANA

Office of the President

August 1, 2019

MEMORANDUM TO THE BOARD OF SUPERVISORS
OF THE UNIVERSITY OF LOUISIANA SYSTEM

SUBJECT: REQUEST REVIEW AND APPROVAL OF THE
GRAMBLING STATE UNIVERSITY MISSION STATEMENT

Grambling State University respectfully requests the review and approval of our current Mission Statement. Your favorable consideration of this request is greatly appreciated.

Sincerely,

Richard J. "Rick" Gallot, Jr., JD
President

RJG:jc

Attachment

MISSION

Grambling State University is a comprehensive, historically-black, public institution that offers a broad spectrum of undergraduate and graduate programs of study. Through its undergraduate major courses of study, which are undergirded by a traditional liberal arts program, and through its graduate school, which has a decidedly professional focus, the university embraces its founding principle of educational opportunity. With a commitment to the education of minorities in American society, the university seeks to reflect in all of its programs the diversity present in the world. The university advances the study and preservation of African American history, art and culture.

Grambling State University is a community of learners who strive for excellence in their pursuit of knowledge and who seek to contribute to their respective major academic disciplines. The university prepares its graduates to compete and succeed in careers related to its programs of study, to contribute to the advancement of knowledge, and to lead productive lives as informed citizens in a democratic society. The university provides its students a living and learning environment which nurtures their development for leadership in academics, athletics, campus governance, and in their future pursuits. The university affords each student the opportunity to pursue any program of study provided that the student makes reasonable progress and demonstrates that progress in standard ways. Grambling fosters in its students a commitment to service and to the improvement in the quality of life for all persons.

The university expects that all persons who matriculate and who are employed at Grambling will reflect through their study and work that the University is indeed a place where all persons are valued, "where everybody is somebody."

Item E.2.   **Grambling State University's** request for approval of the Center of Excellence in Mathematical Achievement in Science & Technology.

EXECUTIVE SUMMARY

In October 2006 the Center for Mathematical Achievement in Science & Technology (CMAST) was established at Grambling State University (GSU). The primary goal of CMAST at inception was to decrease the failure rate of students in introductory mathematics courses. Based on successes achieved, CMAST expanded efforts by engaging in the systemic examination and improvement of instruction in mathematics, science, and engineering technology; thus addressing the retention of more students. The Center has and continues to promote activities that focus on curriculum reform, undergraduate research, placement of students, K-12 outreach, and faculty professional development. Through such efforts the Center has contributed to the University's ability to positively impact the success of students.

The major focus of CMAST at this time is on providing an academic experience for STEM majors that keeps them engaged and connected to the profession beginning in the freshman year. The undergraduate programs that are currently the focus of Center initiatives include: biological sciences, chemistry, computer science, computer information systems, cybersecurity, engineering technology, and mathematics & physics. More than 914 students declared their major in a STEM area or computer information systems in Fall 2018; this is exclusive of the cybersecurity undergraduate degree since it will admit its first cohort in Fall 2019. These degree programs are directly related to the focus of the Center that targets increasing the diversity of the STEM workforce by producing highly prepared graduates.

Recognizing the importance of the work conducted by the Center, the National Science Foundation (NSF) has awarded funds in excess of $2.5M to be used toward activities designed to improve student success and retention. The University is in its third cycle of funding. The success that Grambling has had in obtaining this funding speaks to the fact the Center has been able to meet the goals associated with this federal program. This has been achieved via the implementation of innovative strategies that are meant to prepare highly competitive STEM graduates.

In 2018 Grambling was recognized in Diverse Issues' *Higher Education Top 100 Producers of African American Bachelor's Degrees* publication. This recognition included a ranking of 18th in producing graduates with degrees in the physical sciences, 20th for producing graduates with degrees in Engineering Technologies & Engineering related fields, and 53rd for Computer and Information Sciences and Support Services degrees. The National Science Foundation commissioned a study that identified the undergraduate universities attended by African Americans who earned a doctorate in a STEM discipline during the 2002-2011 time

period. Twenty-one (21) of the top 50 institutions were HBCUs; GSU was one of those HBCUs. The success that GSU has had in graduating students in STEM areas and placement in STEM graduate programs is a direct result of initiatives set forth by the Center.

Grambling has a major role to play in ensuring that the nation has a diverse and highly prepared STEM workforce. The Center has been and will continue to be crucial to the success of STEM majors; it is a model that can be emulated at the regional and national levels. In light of the established record as a foundation of excellence in teaching, research, and service and to assist in future efforts, Grambling State University requests that the Center for Mathematical Achievement in Science & Technology be designated as a *Center of Excellence* by the Louisiana Board of Regents.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, *that the Board of Supervisors for the University of Louisiana System hereby approves Grambling State University's request for approval of the Center of Excellence in Mathematical Achievement in Science & Technology.*

GRAMBLING
STATE UNIVERSITY
GRAMBLING, LOUISIANA

Office of the President

August 1, 2019

MEMORANDUM TO THE BOARD OF SUPERVISORS
OF THE UNIVERSITY OF LOUISIANA SYSTEM

SUBJECT: REQUEST FOR APPROVAL FOR A CENTER OF ACADEMIC EXCELLENCE

Grambling State University requests the approval for a Center of Academic Excellence. Your favorable consideration of this request is greatly appreciated.

Sincerely,

Richard J. "Rick" Gallot, Jr., JD
President

RJG:jc

Attachment

Board of Regents Proposal for Initial Designation as a

CENTER OF ACADEMIC EXCELLENCE at

Grambling State University in

STEM (Science, Technology, Engineering, Mathematics)

A. Description

1. Hallmark of Grambling State University

The Center for Mathematical Achievement in Science & Technology (CMAST) was initially approved in October 2006 for a five-year period. The approval of the Center was then extended through April 2016. Since 2016 Grambling State University (GSU) continues to implement programs that are meant to increase STEM student success and diversity in the STEM workforce.

CMAST provides the means for Grambling State University to engage in the systematic examination and improvement of instruction in mathematics, science, and engineering technology; thus addressing the retention of students. The Center of Academic Excellence will continue to promote activities that focus on curriculum reform, undergraduate research, placement of students, K-12 outreach, and faculty professional development. The Center for Mathematical Achievement in Science & Technology serves as a model that can be duplicated by others that have a desire to enhance the academic preparedness of STEM majors. This function will be expanded with the establishment of a Center of Academic Excellence and the implementation of innovative strategies that support STEM student success.

Grambling State University has shared the success of activities promoted by CMAST at national and international meetings. Recently, STEM faculty was asked to submit a book chapter for a publication being developed by the American Chemical Society. That publication will be devoted to *broadening STEM participation*. The chapter written by GSU STEM faculty highlights activities sponsored by the Center for Mathematical Achievement in Science & Technology. Edits have been made to the chapter and submitted to the American Chemical Society. A proposal developed by STEM faculty for consideration to be included as a concurrent session at the December 2019 SACSCOC Annual Meeting in Houston Texas has been accepted to be a part of the program. The concurrent session facilitated by GSU will focus on the implementation of a data analytics program for STEM and non-STEM students.

Grambling State University has received funding from the National Science Foundation's HBCU-UP program since 2004 to support activities that promote the retention and graduation of STEM students. The University is currently in its third cycle of funding. The success that the University has had in obtaining this funding speaks to the fact that the GSU STEM faculty has been able to meet the goals associated with this federal program. This has been achieved via the implementation of innovative strategies that are meant to prepare highly competitive STEM graduates.

Diversity of STEM Workforce

A United States Department of Education Fact Sheet addresses the role Historically Black Colleges and Universities have in ensuring that by 2020 an additional **1 million** professionals are added to the STEM workforce pipeline; and the role of the HBCU in ensuring diversity in the STEM workforce. Information

on this fact sheet indicates *"To meet this need and bring welcome diversity to STEM industries, we must continue to support and encourage STEM degree completion, especially for African-Americans and others who are underrepresented in these fields yet have a long history of achievement in STEM fields. Historically Black Colleges and Universities (HBCUs) are particularly critical to meeting the STEM challenge, as engines of economic growth and ladders of advancement for generations of African Americans."* This *fact sheet* highlights the fact that HBCU's are 3% of colleges and universities but produce 27% of African-American graduates with bachelor's degrees in STEM fields.

Grambling State University has a history of producing highly prepared STEM graduates who have success in the workforce, as well as success in graduate and professional degree programs. GSU is recognized in the 2018 Diverse Issues in *Higher Education Top 100 Producers of African American Bachelor's Degrees* publication. This recognition includes a ranking of 18th in producing graduates with degrees in the physical sciences, 20th for producing graduates with degrees in Engineering Technologies & Engineering related fields and 53rd for Computer and Information Sciences & Support Services degrees.

The National Science Foundation (NSF) commissioned a study that identified the undergraduate universities attended by African Americans who earned a doctorate in a STEM discipline during the 2002-2011 time period. Twenty one (21) of the top 50 institutions were HBCUs; Grambling State University was one of those HBCUs.

Grambling State University continues to have a major role to play in ensuring that the nation has a diverse and highly prepared STEM workforce. The recognition of the Center for Mathematical Achievement in Science and Technology as a Center of Academic Excellence supports this role.

2. List and describe existing program(s) that will be part of the Center's Activities

The six undergraduate degree programs that the University offers in STEM will be a part of the Center's activities. One degree program housed in the College of Business will also be included. These degree programs are biological sciences, chemistry, computer science, computer information systems, cybersecurity, engineering technology, and mathematics & physics. The computer science and engineering technology programs are accredited by the appropriate commission of ABET (formerly known as the Accreditation Board for Engineering and Technology). The chemistry program is certified by the American Chemical Society's Committee on Professional Training. The computer information systems degree program is recognized by the Association to Advance Collegiate Schools of Business (AACSB). Fall 2018 enrollment data shows that the current student enrollment is robust in these areas. More than nine hundred students (914) have declared a major in a STEM area or computer information systems. No enrollment data is provided for the Bachelor of Science degree program in cybersecurity. The first cohort in this program has been admitted for fall 2019 and enrolled in courses associated with the curriculum for the cybersecurity degree.

The identified degree programs are directly related to the focus of the Center that targets increasing the diversity of the STEM workforce by producing highly prepared graduates. The student profile for these degree programs is aligned with the overall enrollment demographics of the University. The majority of the students majoring in a STEM degree program are of African American descent. Since 2013, six hundred nine (609) students have completed the requirements for a STEM or Computer Information System degree at the bachelor level. This data is captured in the tables that follow.

ENROLLMENTS IN MATH AND SCIENCE (# OF MAJORS)						
Academic Program	Fall 2018	Fall 2017	Fall 2016	Fall 2015	Fall 2014	Fall 2013
Chemistry	46	43	46	47	50	52
Math & Physics	31	36	27	19	20	26
Computer Science & Computer Information Systems	198	163	171	180	164	178
Engineering Tech	216	220	195	150	151	203
Biology	423	445	353	329	234	235

MATH AND SCIENCE BACCALAUREATE DEGREES AWARDED (# OF COMPLETERS)						
Academic Program	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015	2013-2014
Chemistry	5	6	13	4	8	-
Math & Physics	5	5	2	3	1	5
Computer Sci/Info Sys	25	26	31	22	33	35
Engineering Technology	18	20	21	14	18	35
Biology	52	53	32	38	40	39

Grambling State University faculty has designed and implemented innovative strategies that have impacted the success of STEM majors in a positive manner. These strategies include redesigning mathematics courses and introductory science & engineering technology courses by *infusing a more industry relevant focus*. Faculty also designed and implemented a Learning Community for first year STEM students. The Learning Community integrated *Academic Coaching* into the structure to support the adjustment of first time freshmen to the freedoms associated with the college environment. **Section E2** of this document which begins on page 14, provides a detailed description of these activities.

B. Faculty and Administration

1. List core and affiliated faculty members who will contribute to the Center

The core faculty who will be responsible for leading specific activities of the Center include representatives from each of the STEM departments. The core faculty include Dr. Connie Walton (chemistry), Dr. Yenumula Reddy (computer science), Dr. Naidu Seetala (mathematics & physics), Mr. Lane Elien (engineering technology), and Dr. Paul Kim (biology). Mrs. Corisma Akins serves as the director of the center. These individuals will play a key role in implementing the activities of the Center of Academic Excellence. The entire STEM faculty will be associated with this Center, primarily being responsible for the implementation of activities. As a whole, STEM faculty at Grambling State University has made significant contributions to training highly prepared STEM students. There are a total of 39 full time STEM faculty.

Mathematics & Physics	Chemistry	Biology	Computer Science	Engineering Technology
12	6	11	4	6

Examples of achievements of STEM faculty are highlighted below. Also highlighted are achievements of student groups that were mentored by STEM faculty.

- **Dr. Connie Walton** presented at the 256th American Chemical Society (ACS) Conference in Boston, MA that was held in August 2018. Her presentation was entitled "Implementation of a STEM student success program to improve the retention and graduation of STEM students." As a result of her presentation, GSU was invited to submit a chapter for inclusion in an American Chemical Society book entitled *Growing Diverse STEM Communities: Methodology, Impact, and Evidence.* Dr. Yenumula Reddy and Mrs. Corisma Akins coauthored the chapter that was prepared by the GSU team that is titled "Design and Implementation of a STEM Student Success Program at Grambling State University." This chapter is currently under review. Dr. Connie Walton received the 2018 Winifred Burks-Houck Professional Leadership Award from the National Organization for the Professional Advancement of the Black Chemist and Chemical Engineer (NOBCChE). This award recognizes STEM leadership. A proposal that she co-developed that focused on expanding the data analytics skills of undergraduate students across all disciplines at Grambling State University was accepted to be a concurrent presentation at the Annual SACSCOC meeting that will be held in Houston TX in December 2019. Other presentations include: (1) Co-presenter at 2018 University of Louisiana System For Our Future Inaugural Meeting, "Expanding the Research Capacity at Grambling State University using Partnerships", **January 2018,** (2) Co-presenter at 2015 SACSCOC Annual Meeting held in Houston Texas, "Utilization of a Speak Student Approach for Teaching English Composition to Underprepared Freshman Students", **December 2015,** (3) Co-presenter at 2015 Scholarship of Teaching and Learning (SOTL) Commons Annual Meeting held in Savannah Georgia, "Improving the Success and Retention of Computer Science Majors", **Spring 2015,** (4) Co-presenter at 2014 SACSCOOC Annual Meeting held in Nashville Tennessee, "Implementation of a Learning Community for STEM Students", **December 2014,** (5) Co-presenter at 2013 SACSCOC Annual Meeting held in Atlanta, Georgia, "STEM Student Success Center at Grambling State University", **December 2013,** (6) Co-presenter at 2012 SACSCOC Annual Meeting held in Dallas, Texas, "Implementation of the Quality Enhancement Plan at Grambling State

University" **December 2012**, and (7) Reforming Mathematics, Virginia State University, **April 23, 2010.** She is the co-inventor on two U.S. Patents.

- **Mrs. Corisma Akins** presented at the 2019 HBCU UP/CREST PI/PD Meeting in Washington, DC. This presentation focused on the *Implementation of a Big Data Science Camp for High School Students*. Mrs. Akins prepares STEM students for success in delivering science demonstrations to K-12 students. She accompanies students to STEM related conferences. These conferences include the Louisiana Academy of Sciences, the Women of Color (WOC) STEM Conference, the Black Engineer of the Year Award (BEYA) STEM Conference, the National Society of Black Physicists (NSBP), the National Organization for the Professional Advancement of Black Chemist and Chemical Engineers (NOBCChE), and the National Society of Black Engineers (NSBE). Mrs. Akins has also co-mentored students that competed in the HBCU Battle of the Brains Competition.

- **Dr. Naidu Seetala** and a student from the Math and Physics department *virtually* attended and presented at the 11th International Conference on Education and New Learning Technology (EDULEARN19) in Palma de Mallorca, Spain in July 2019. Their presentation "Building and Programing Robots – A Group Activity for Enhanced Learning of Undergraduate General Physics" gave insight on how GSU incorporated the use of robotics into a general physics course. Dr. Seetala has involved undergraduate students on research teams that focused on: (1) Spark Plasma Heat Treated ZrB_2-SiC and HfB_2-SiC Composites, (2) Magnetization studies of FePt/Cu FePt/Fe_2O_3 nanoparticles and $SmCo_5$ powders - used as 3D-printing feedstock to make magnetic material for miniature transformers, and (3) Biodegradable polymers.

- **Dr. Yenumula B. Reddy** was appointed as a member of "Louisiana Cybersecurity Commission" in January 2018. Currently, he is serving as a co-chair on two committees. These committees are *Workforce Development, Education, and Public Outreach* and *Information Sharing and Integration*. His research contributions span a number of areas including wireless communications, sensor networks, and applications of game models, neural networks, and genetic algorithms to wireless networks. He has authored more than 150 publications. GSU undergraduate students mentored by Dr. Reddy have given more than 200 technical presentations. He is Editor-in-Chief of the International Journal of Security, Privacy, and Trust Management (IJSPTM). He is serving as an associate editor of proceedings of International Conference on Information Technology since 2009. Dr. Reddy served as one of the editors of SENSORCOMM in 2011.

- **Dr. Danny Hubbard** received an award from NOBCChE. His award, the Henry C. McBay Award, recognizes STEM educators for demonstrating outstanding contributions to the education and mentoring of young scientists and engineers. Dr. Hubbard has supervised more than twenty students in the completion of research projects.

- **Dr. Paul Kim's** research interests revolve around obesity-associated disorders including non-alcoholic fatty liver disease (NAFLD), endothelial dysfunction, and immunosuppression. During his seven years at GSU, Dr. Kim has generated approximately $410,000 in direct cost in research funding. Sixteen undergraduate students have been a part of his research team. A review of the

students who were associated with his research team that have completed Bachelor of Science degrees, show that they are highly competitive. Three of these graduates are pursuing a Ph.D. in a STEM discipline (Tulane, Rochester, Iowa State), three work as research technicians (Cold Spring Harbor, NYU Langone, Pennington), and one is in medical school (Howard).

- **Dr. Dagne Hill** has published 7 peer-reviewed articles. As a previous gratis Research Associate at Louisiana State University Agriculture Center (Hill Farm Research Station, Mastitis Laboratory) she conducted various water quality studies involving the comparative assessment of the physicochemical and bacteriological qualities of selected streams. Her research focuses on studying environmental factors that influence the prevalence and distribution of coliform bacteria. In 2019, Dr. Hill finalized a partnership with the Mayo Clinic of Medicine for summer research internships for students pursuing undergraduate STEM degrees at GSU. Two students completed an internship during the summer 2019 at Mayo Clinic. Dr. Hill also developed a 3+3 Articulation Agreement with Logan University School of Chiropractor Medicine in Missouri.

- **Dr. Jacqueline Harris** has multidisciplinary training in biostatistics and biochemistry. She has published in areas that include statistical modeling of health disparities, and genetic network discovery in the Hap Map data set. Dr. Harris has also worked on applied statistics problems involving survival analysis of GBM (Glio-Blastoma Multiforme) patients as predicted by an 8-gene expression signature. Findings from this research were published in journals such as PLoS ONE and Archives of Medical Research. The GBM survival paper received national recognition and was ranked in the top 2% of published articles in biology and medicine by *Faculty of 1000 Medicine*. Since her arrival at GSU in 2017, she has worked to bring in grant funding to enhance student training in the area of bioinformatics and to continue her research in health disparities.

- **Dr. Prasanthi Sreekumari's** research contributions span a number of areas including Big Data, Cloud Security, Intrusion Detection, Wireless Communications and Data Center Networks. She has authored more than 20 peer-reviewed articles in journals and conference proceedings, and 2 book chapters. She has guided more than 15 students who presented at regional and national meetings. Student teams guided by Dr. Sreekumari have been awarded cash prizes in the Bayou Classic BizTech Challenge that has a cybersecurity focus. She mentored student research projects in the *Cyber Research for Empowering Women Experimenters* (CREWE) workshop in March 2019 that was hosted by Louisiana Tech University and sponsored by Google.

- **Dr. Waneene C. Dorsey's** research focus is molecular toxicology. Dr. Dorsey received a Louisiana Biomedical Research Pilot Award (LBRN) of $79,000 in May 2017, to investigate "*The Identification of Stress Signaling Molecules in TIB-73 Mouse Hepatocytes Exposed to Pentachlorophenol.*" The success of that project lead to Dr. Dorsey receiving a full three-year LBRN award in 2018 in the amount of $326,394.00 to investigate the "*Autophagy role and regulation in cancer.*" During the 2018 – 2019 academic year, she established a contractual agreement with Southern University and A&M College (SU), Baton Rouge. The agreement targeted Ph.D. students in the SU Environmental Toxicology Ph.D. program training GSU undergraduate students to perform advanced molecular biotechniques. Dr. Dorsey's research team included seven students during the 2018 -2019 academic year. Dr. Dorsey's more recent publications include: (1) **Dorsey, W.C.**

2015. Mitogen-activated protein kinase (MAPK) signaling pathway and mammalian cells. *Transcriptomics*. 3(2):116, DOI:10.4172/239-836.1000116, and (2) Kaur, G., Pinkston, R., Mclemore, B., **Dorsey, W.C.**, Batra, S. 2018. Immunological and toxicological risk assessment of e-cigarettes. *European Respiratory Review*. 27:170119-2017, DOI: 10.1183/ 16000617.0119-2017.
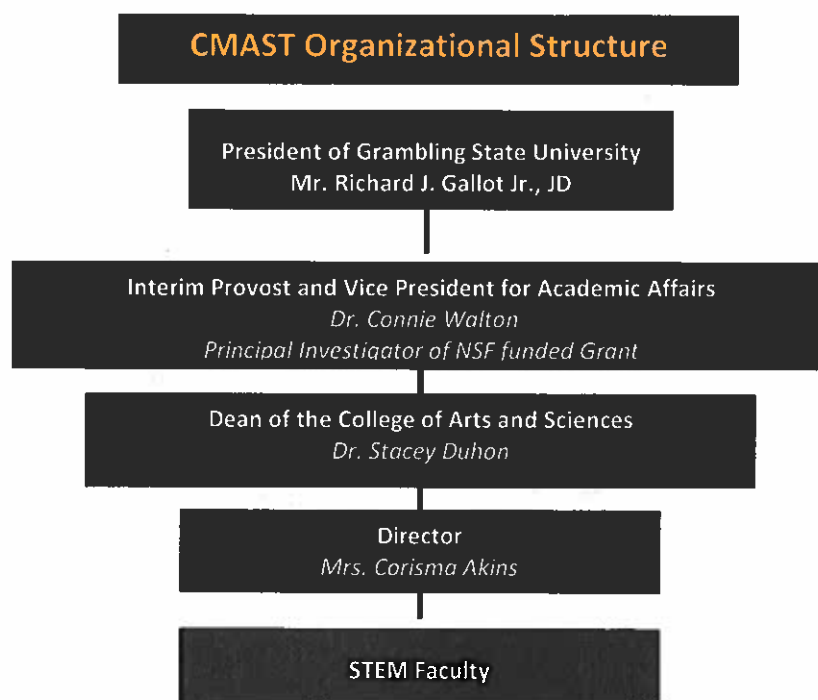
STEM faculty members actively seek opportunities for students to engage in activities that support addressing problems that are relevant to the workforce. Examples of these activities are listed below.

- A team of students competed in the **2019 Making an Innovation Showcase** as a subcomponent of the Emerging Researchers Networking Conference (ERN). This conference is hosted by the American Association for the Advancement of Science (AAAS), Education and Human Resources Programs (EHR) and the National Science Foundation (NSF) Division of Human Resource Development (HRD). These students were led by a faculty advisor from the chemistry department. The student team created a car safety device to prevent the number of heat related car deaths for children. They won best video and it was shown at the beginning of the showcase as an example of the quality of videos that the judges wanted to see. Another GSU student team also competed in the **2018 Making and Innovation Showcase.**

- A collaborative GSU team of Engineering Technology, Math/Physics, Biology and Chemistry students participated in a **Department of Defense's (DoD) Army Research Laboratory HBCU/MI Undergraduate Student Design Competition** that was held in April 2019 in El Paso Texas. Only 11 schools were selected to be a part of this completion, only 4 institutions that participated are recognized as a Historically Black College/University (HBCU). The students were tasked with using a *level one* bacteria to make a cellulose polymer. This cellulose polymer was then mixed with other materials to yield a composite. The composite was then used to fabricate parts for a drone. The drone had to be fully functional for the competition. The drone designed by the GSU student team passed the preflight safety check during the competition. The competition was held in April 2019 in El Paso Texas. An interdisciplinary faculty team guided the student team.

- Faculty in the College of Arts and Sciences and the College of Business supported a group of students who participated in the **2nd HBCU Battle of the Brains (BOTB) 2018 Pitch Competition** held in Austin, TX. This completion featured teams of students from 23 HBCUs. This annual event is organized by the National Black MBA Association, Austin Texas chapter. The main sponsor for the 2018 competition was Home Depot. Student teams had to address a problem of relevance to Home Depot. Grambling State University students placed 3rd in this competition and received a $10,000 prize. Attendees also had the opportunity to attend the South by Southwest (SXSW) Tech Conference. A GSU team of interdisciplinary students including Computer Science, Chemistry, Marketing, and Business reentered the competition for the **3rd HBCU Battle of the Brains Competition** in March 2019. The main sponsor for the 2019 competition was the National Football League (NFL). Student teams had to address a problem of relevance to the NFL. GSU placed in the top 7 out of the 25 schools that participated.

- STEM faculty worked with students on preparing for a flight competition that is a part of the *Annual Meeting of the National Society of Black Engineers* (NSBE). GSU student teams have

historically done well at these competitions. Two teams of GSU students participated in the **flight competition sponsored by Boeing** during the 2013 NSBE convention and received second and third place. One GSU team participated in the flight competition at the 2018 NSBE convention and won 3rd place.

2. Administrative Structure

The administrative structure for CMAST includes a director who works closely with **STEM** faculty to manage activities. Oversight is provided by both the principal investigator of the grant that funds the activities of the Center and the Dean of the College of Arts and Sciences. Recognition as a Center of Academic Excellence will not affect the present organizational structure of the University.

CMAST Organizational Structure

President of Grambling State University
Mr. Richard J. Gallot Jr., JD

Interim Provost and Vice President for Academic Affairs
Dr. Connie Walton
Principal Investigator of NSF funded Grant

Dean of the College of Arts and Sciences
Dr. Stacey Duhon

Director
Mrs. Corisma Akins

STEM Faculty

C. Facilities and Equipment

The Center for Mathematical Achievement in Science and Technology (CMAST) is housed in Carver Hall, a three story-building that has:

- 2 auditoriums (each with a seating capacity of ~100),
- 2 large classrooms (each with a seating capacity of 60),
- 11 additional classrooms (each with a seating capacity of 40),
- A **STEM** Resource Center,
- 20 **STEM** instructional laboratories (each accommodates at least 25 students), and
- **STEM** administrative and faculty offices.

The CMAST Office occupies a large room on the third floor of Carver Hall (over 900 square feet). The Departments of Mathematics and Physics, Computer Science, Biology, and Chemistry, are housed in

Carver Hall. The Department of Engineering Technology is housed in T. L. James Hall, an adjacent building. Each department maintains instrumentation and equipment to train students.

Grambling State University has acquired scientific instrumentation that faculty train students on the proper use and the interpretation of data. Listed below are some of the instrumentation facilities that are available.

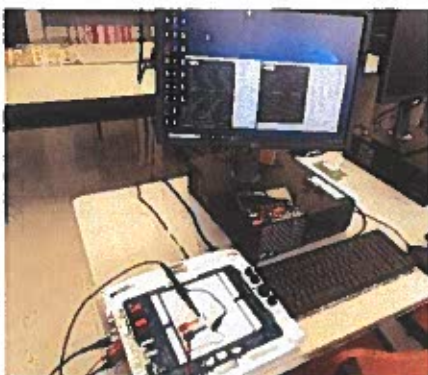ENGINEERING TECHNOLOGY FACILITIES

3D Printers

Cisco Academy Lab

Computer Aided Design Lab

Programmable Logic Control Lab

25 KN Vertical Actuator

Circuit Analysis/Design Lab

MATERIAL SCIENCE INSTRUMENTATION

Positron Lifetime Spectroscopy, Differential Scanning Calorimeter/Thermal Gravimetric Instrument, Thermomechanical Analysis Instrument, FTIR's, UV Visible Spectrophotometer, Atomic Absorption Spectrometer, Gas Chromatography/Mass Spectrometer, Continuum FTIR Microscope, Scanning Electron Microscope, a variety of other microscopes

Magneto Sputter Coater

Energy Dispersive X-ray Spectrometer

Continuum FTIR Microscope

SQUID Magnetometer
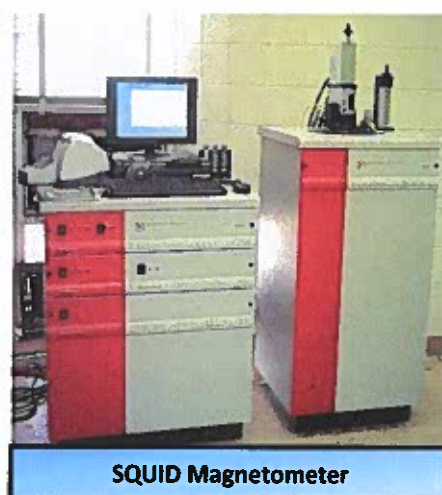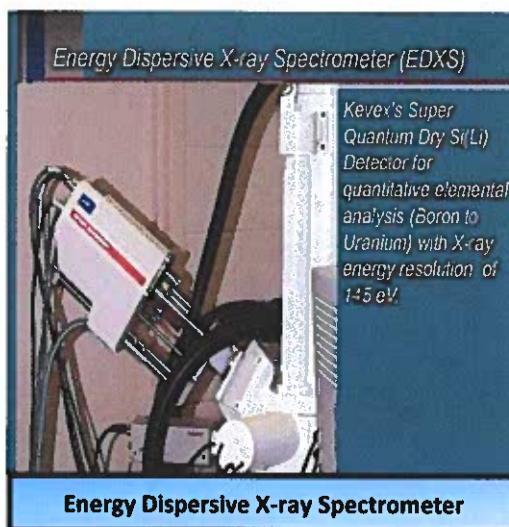
Lab that houses FTIR, UV Vis, AA & GC/Mass Spectrometer

Polarizing Optical Microscope Equipped with Hot Stage

Scanning Electron Microscope

Vibrating Sample Magnetometer

D. Support and Budget

Grant funding received from the National Science Foundation will support this Center. Listed below is a summary of the Award Notice

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AWARD NOTICE

Award Date:	June 5, 2018
Award No. (FAIN):	1818697
Proposal No.:	1818697
Managing Division Abbreviation:	HRD

The National Science Foundation hereby awards a grant of $903,354 to Grambling State University for support of the project described in the proposal referenced above . This award is expected to total $2,249,909.

This project, entitled "Implementation Project - Collaborative Methods for Addressing Student Success in Totality (CMAST III)," is under the direction of Connie R. Walton, Stacey Duhon, Bassidy Dembele, Naidu V. Seetala, Yenumula B. Reddy.

This award started July 1, 2018 and ends June 30, 2023.

This is a continuing grant which has been approved on scientific / technical merit. Contingent on the availability of funds and the scientific progress of the project, NSF expects to continue support at approximately the following level:

FY 2020	$448,899
FY 2021	$449,318
FY 2022	$448,338

The total three year budget for this center is highlighted in the table below. All of the funds used to support this Center are from a federal source. A detailed budget is provided at the end of this document.

REVENUE SOURCE	FY 2020	FY 2021	FY 2022
Federal grants, contracts:			
National Science Foundation	$448,899	$449,318	$448,338
Total	$448,899	$449,318	$448,338

E. Measures for Center of Excellence

1. *How will the Center enhance the Institution's mission?*

Grambling State University recognizes that there is a need to continue the mission of its founders to provide educational opportunity for all regardless of socioeconomic status. Support programs and services are provided to ensure student success. Some STEM majors at Grambling State University come from underserved communities and may not have attended K-12 schools that were equipped to provide an educational experience that is aligned with academic success in a STEM discipline. These students however acquired an interest and commitment to pursuing a STEM degree. STEM programs at Grambling State University do not reject students who may not have acquired the necessary skills at the secondary level, but embraces these students.

CMAST has an overall goal of graduating highly competitive STEM students. This is accomplished by providing services to students that keeps them engaged. The STEM Faculty has developed methods that are recognized as best practices in the field. This recognition has enhanced the ability of GSU to be successful in receiving grant funding that focuses on STEM educational training and STEM research. The Center of Academic Excellence will expand on this success by leading the STEM community in discussions related to broadening participation. This will be done by hosting *Institutes* that are meant to identify additional strategies that to diversify the STEM workforce. Individuals invited to participate in the Institutes will include representatives from Industry.   The proposed Center of Academic Excellence will also expand K-12 outreach. The Center will target developing a *Mobile Science Demonstration Lab* that can travel to areas that are not in close proximity to the university. Specific demographic areas that will be targeted will include those that have persistent poverty and a low percentage of citizens who have attained some college training.

Evidence that the Center of Academic Excellence is an institution priority are captured by the vision of President Gallot. This vision includes preparing students to meet current and future workforce needs. He is making an effort to ensure that we are engaging the business community to make sure training is current. This vision also includes faculty/staff thinking outside the box in an effort to make sure the University is providing a quality education for all. President Gallot has challenged the faculty to be creative and identify curricular expansions. Under his leadership a Bachelor of Science degree program in Cybersecurity has been approved. It is a high priority for Grambling State University to be a leader that engages the community and inform policy at the state and national level. President Gallot recently testified before the 116th Congress on "Growing and Diversifying the Cyber Talent Pipeline." He addressed the lack of diversity in the Cybersecurity workforce and the role that HBCU's have in correcting this problem.

Having the support of top administrators at Grambling State University has enabled faculty to deliver programs that meet the needs of students. This ensures programs that are implemented using grant funding will continue to be a part of the unit after the funding ends.

Several objectives have been identified for the Center of Excellence that are related to understanding how to develop a student's scientific identity at an early age. Objectives have also been identified that focus on improving the scientific literacy skills of students.

These objectives are highlighted below. Each objective supports the overall goal of the Center that focuses on diversifying the STEM workforce.

- Implement Social Science Research projects that focus on the impact that a student's Scientific Identity has on the pursuit and persistence in a STEM degree program.
- Develop a *Mobile* Science *Demonstration Lab* that will support taking science into the community.
- Host *Broadening Participation* workshops/institutes.
- Expand partnerships with key industries and research intensive universities.
- Increase the second to third year retention rate of STEM majors from a four year average of 62% to 85%.
- Increase the retention of Mathematics & Physics majors from the 1st to 2nd year from 53.3% to 70%.
- Increase the retention of Mathematics & Physics majors from the 2nd to 3rd year over a five year average of 25% to 60%.
- Increase STEM graduates by 20%.
- Increase bachelor level graduates that have skills in Big Data Analytics from ~1% to 20%.
- Equip faculty with the skills that are needed to be effective in teaching Generation Z students.

2. *How has the institution demonstrated performance excellence?*

Grambling State University has demonstrated academic excellence in STEM education. Highlighted in this section are noted accomplishments related to STEM education.

Introductory Math Courses

When the Center was first approved in 2005 the focus was on improving the ability of students who enrolled in introductory mathematics courses to demonstrate that they had achieved the student learning competencies that had been identified. Introductory mathematics courses were redesigned to include the addition of a problem solving session and a change in teaching strategy to include application based problems. The success rate of students in these courses improved significantly. The number of students that earned a grade of D, F, or withdrew from the course continues to be lower than before the introductory courses were redesigned (see figure below).
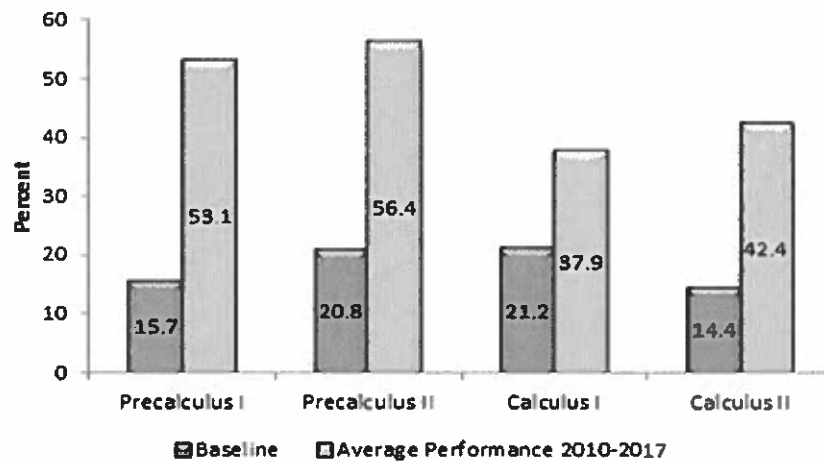
Student Success in Introductory Math Courses after CMAST I funding ended (2010-2017) compared to Baseline Data (Fall 2004).

Retention of STEM majors from 1st to 2nd year

The Center for Mathematical Achievement in Science & Technology implemented strategies to improve the retention of freshman STEM majors to the sophomore year. These strategies included redesigning introductory STEM courses, establishment of a STEM Learning Community and the use of Academic Coaches.

### Example of redesigned introductory STEM Course

Data for the fall 2009 semester showed freshman engineering technology students were retained to the major at a rate of only 55%. The engineering technology faculty attributed the low retention rate to a lack of motivation of students to learn the fundamentals of mathematics, physics and engineering prior to obtaining experience in using applications. Students wanted to get hands-on experience immediately. This experience was not being provided due to introductory engineering technology courses having no associated laboratory. Freshman engineering technology majors, therefore, dropped out of the program, not as a result of the inability to do the work, but because they could not "see engineering" in their introductory courses. To address the need for students to get hands on experience, ETC 103 Engineering Graphics was redesigned. During the fall 2009 semester, a redesigned section of ETC 103 was piloted. The pilot section required students to work on a project that involved the design, building and testing of a model plane. The redesigned course was a huge success with students. Eighty seven (87%) percent of students enrolled in the pilot section earned a grade of C or higher. Fewer absences were also observed. Engineering Technology faculty infused mini-projects into all sections of ETC 103 beginning with the fall 2010 semester.

Learning Community with the integration of Academic Coaches

Grambling STEM faculty decided that there was a need to address how well freshman students adjusted to the freedom associated with living away from home. To address this need, academic

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coaching was integrated into the structure of the learning community. Training was provided for academic coaches to ensure they were equipped to be effective. The responsibilities identified for the academic coach were modeled after the coaching model used in athletics. The academic coach was concerned with the whole student, academic matters as well as nonacademic. The most effective academic coach was found to be one that had a story to tell, one who had made a complete turn-around after struggling to adjust to campus life that first year of college. This coach was found to have the biggest impact on mentees due to added credibility.

The STEM Learning Community and the redesigned introductory courses impacted the academic preparedness of students in a positive manner. As shown in the Figure below, the 1st to 2nd year STEM retention rate increased from a baseline average of 32.4% to 60.5%.
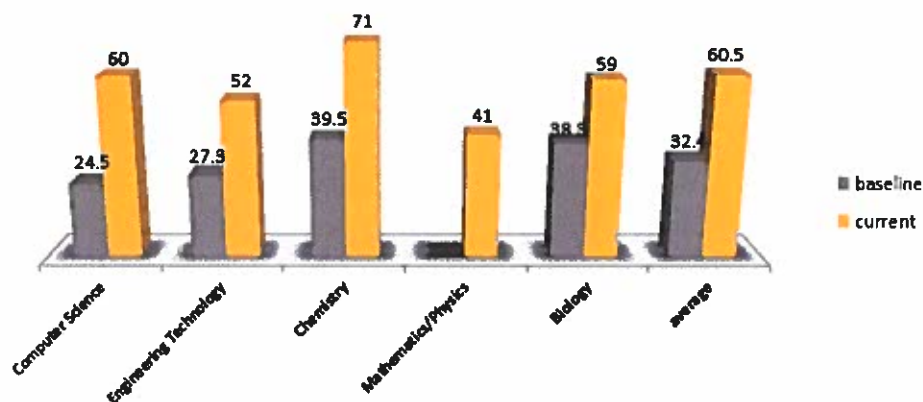
Comparison of average 1st to 2nd year Retention Data for Fall 2011-Fall 2018 period to Baseline Data (2006/07).

Sharing of work with Scientific/educational Community

CMAST has done a good job in disseminating results of this project. Faculty and staff presented at several annual meetings of SACSCOC regarding implementation of CMAST activities. The first presentation given in 2014 focused on the *Implementation of a STEM Student Success Program*. A second presentation was given in 2015 on *Improving Student Success via a STEM Learning Community*. Another presentation entitled *Improving the Success and Retention of Computer Science Majors* was given at the 2015 Scholarship of Teaching and Learning (SoTL) Commons Annual Meeting. In July 2015, a presentation was given at the 22nd International Conference of Adults Learning Mathematics (ALM) in Alexandria, Virginia entitled *CMAST and QEP (Quality Enhancement Plan): Developing 20/20 Mathematical Vision in a STEM Environment.*

Grambling State University has been able to make a positive impact on the STEM workforce by producing highly prepared STEM graduates. As stated earlier, since 2013 GSU has produced 609 STEM graduates. The proposed Center will allow the University to demonstrate excellence on a higher level by providing models that can be used at the regional and national level to engage students in STEM. Specific focus will be students that live in socially and economically disenfranchised communities.

3. *Is there an ongoing, successful effort to secure funding/partnerships to support the mission and activities of the Center? What is the plan for the next five years to maintain and enhance the performance of the Center and to ensure future viability?*

Grambling State University received funding from the National Science Foundation that is expected to total 2.25 million dollars.   The award began on July 1, 2018 and will end on June 30, 2023.   The funding received per year is slightly less than $449,000. This funding will support the ability to maintain and expand the performance of the Center for Mathematical Achievement in Science & Technology.

Additional funding will be pursued that will be used to supplement funding received from the National Science Foundation. This funding could originate from private foundations.

4. *List and describe programs under development for the Center: credential, purpose, anticipated implementation, and expected productivity. How will each contribute to the Center's focus?*

The Center will expand the training that STEM and Non-STEM majors receive to include areas that meet workforce needs. A report released in 2011 by McKinsey & Company cites workers with skills in big data analysis as a growing workforce need. This study indicates that the United States faces a shortage of between 140,000-190,000 workers with deep analytic skills. An additional 1.5 million managers and analysts who understand big data science enough to ask the correct questions and use the results effectively to solve problems are also needed. Big data analysis is becoming increasingly important to most fields.

Grambling State University will be establishing a Big Data Training Program. This training program will increase the number of bachelor level graduates with skills in Big Data Analytics from ~1% to 20%, over a 4 year period. The components of this Big Data Training Program are: (1) the Development of interdisciplinary big data science courses & development of a certificate program, (2) Infusion of Big Data Sciences into existing key courses across majors, (3) Faculty professional development, and (4) Research component for students.

Development of Interdisciplinary Big Data Science Courses and Certificate Program - Four courses have been earmarked for development and implementation. These courses will be open to all majors, including non-STEM majors. An introductory course has been developed and offered for the first time during the Fall 2017 semester. This 3 credit hour course covers topics that include characteristics of big data, sources of big data, big data platforms, text analysis/streams, and introduction to the R language. This course targets the second semester freshman. Feedback from students who were enrolled in this course during the Fall 2017 and Fall 2018 semesters, is being used to make improvement to this course. A second course, Big Data Analytics, at the sophomore level has been developed. This course has learning outcomes that include *demonstrating a fundamental understanding of Hadoop Distributed File Systems, understanding how to test and debug MapReduce applications,* and *using RHadoop to analyze big data.* The junior and senior level courses that will be developed and offered in this Big Data Training Program will provide the student with the opportunity to complete projects that are larger in scope. Students will be encouraged to enroll in the *Descriptive and Inferential Statistics Courses* that are currently being offered by Grambling State University. This Big Data Training Program will be marketed to students beginning at the freshman year. The marketing will include highlighting how data analytics is aligned with workforce needs.

Grambling State University will seek approval for a **Certificate Program in Data Analytics.** The curriculum for the Certificate Program will consist of 18 credit hours. At least half of the 18 credit hours will be at the junior and senior level. This Certificate Program will target undergraduate students, STEM and non-STEM.

**Infusion of Big Data Sciences into existing key courses across majors** - To expand the data analytics training to reach as many STEM students as possible, Big Data Analytics will be included as topics in existing courses. Chemistry faculty will infuse topics related to Cheminformatics into the organic chemistry courses (CHEM 223/224). Topics that will be covered will include steps for obtaining information from chemical databases that capture the structure and properties of molecules. Also topics that include the use of molecular modeling in the design of molecules, and the use of Quantitative Structure- Activity Relationship (QSAR) software to predict the toxicity of chemicals will be addressed.

Data analytics mini-projects will be infused into the Descriptive & Inferential Statistics Courses (MATH 273 & 274) that are currently being offered. Students pursuing STEM and non-STEM degrees enroll in these math courses.

Engineering Technology will incorporate mini-projects that target developing skills in data analytics into an upper level electronics engineering technology course (EET 405). An activity that requires these students to analyze time domain and frequency domain signals will be included. The MATLAB signal processing toolbox will be used to extract essential information from a large data set. This information will address a specific electronics engineering issue.

**Faculty Professional Development** - It is important that faculty be provided with training opportunities that will enhance skills in big data analytics. A survey of the current full time STEM faculty indicates 14% have some experience in data analytics. This training will be provided to faculty in the form of seminars and workshops that will be held on the campus of Grambling State University. Financial assistance will also be provided to support conference attendance.

**Research Component** - The Big Data Training Program will promote research that has a data analysis component. A research program that targets research during the fall and spring semesters will be provided. Students will be included in the research teams of STEM faculty, beginning at the freshman year. Faculty will be encouraged to include in their existing projects a component that focuses on data analytics. Faculty who include students in their research teams will receive funds that can be used for the purchase of supplies and travel. Students who are a part of the team will receive a _Research Scholars Stipend._ This research program was piloted during the fall 2017 semester.

An article published in Science Education in 2013 titled "Increasing Persistence of College Students in STEM" indicates that there are several factors that determine retention; learning and professional identification. Engaging students in research was highlighted by the authors as a way to impact learning and professional identification. This research component of the Big Data Training Program in CMAST is expected to increase the retention of STEM students from the 2nd to 3rd year.

**Mathematics and Physics Degree Program Enhancement** - To retain mathematics & physics majors, the faculty will implement a strategy, beginning at the freshman year, to engage students throughout the curriculum. Problem-based learning projects will be infused into the freshman experience by

linking these projects to content covered in introductory physics courses. These projects will support the student's ability to connect concepts with tangible applications and evolve into projects connecting the concepts with the profession. Research has shown that establishing a connection to the profession beginning at the freshman year is critical to high persistence rates for STEM students. Students in the mathematics and physics program will be given a series of yearlong progressive projects that will be completed in parallel with specific courses. These will be group projects and in some cases interdisciplinary. The year-long progressive projects will target freshman and sophomore math & physics majors.

__Mathematics & Physics Student Participation in Faculty Research__ - Students will become an integral part of research being conducted by faculty in the mathematics & physics department. Research has been shown to be a powerful learning tool that engages students and stimulates curiosity; and it naturally encourages professional identification as students make presentations of research findings to a scientific assembly. Students will be required to present their research findings at regional and national conferences.   These presentations will improve self-confidence and expand scientific knowledge.

__Mentoring and Social Integration of Mathematics & Physics Majors__ - Each Mathematics & Physics major will be assigned a mathematics & physics faculty mentor who will also serve as the academic advisor. This person will have a primary responsibility of making sure the student remains engaged throughout navigation through the curriculum. The department will revitalize student organizations that include the mathematics & physics club and ΣΠΣ honor society. These organizations will serve as an additional method of engaging mathematics & physics majors in community service as well as professional related activities.

__Retention__ - Academic Coaching in combination with peer led tutorial sessions will be used to address the issues associated with the 2nd to 3rd year retention of STEM majors. The average 2nd to 3rd year retention rate for all STEM majors over a 4 year period is 62%.   To improve this retention rate Academic Coaching and tutorial sessions will be linked to specific gate keeper courses: BIOL 202, CHEM 223/224, CHEM 230, CS 230, Phys 153/154 and EET 201. Student performance in these courses (see figure below) is impacting STEM student persistence from the sophomore to junior year.
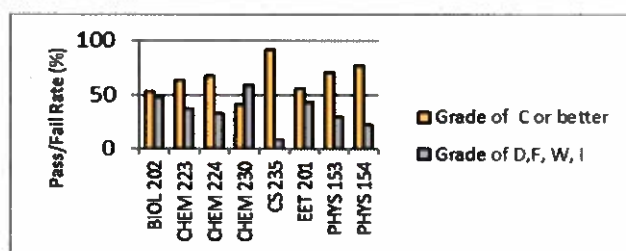
Students' average performance in Select STEM Gatekeeper Courses for Fall 2012 - Spring 2017.

__Enhancement of Soft Skills of STEM Students__ - Feedback that Grambling State University has received from companies recruiting our students indicates a need to address soft skills. The need for universities to develop the soft-skills of students is not unique to Grambling State University.

CareerBuilder administered a survey to employers in 2014 and found that 77% of those surveyed indicated they were seeking candidates with appropriate soft skills. Sixteen percent of those employers felt soft skills were more important than hard skills.

To address the soft skills of STEM majors, CMAST with partner with the Office of Career Planning and Placement at GSU. Sessions will be provided that specifically target STEM majors beginning with the freshman year. Sessions that will be offered include *Putting the ME in ResuMe, How to Ace the Interview, Dressing-You Dictate the Message, Being Social Includes the Idea of Etiquette* and *Marketing Self as a Business*. Beginning with the freshman year, each STEM student will develop a resume under the guidance of the Office of Career Planning and Placement. Each STEM student will be required to attend at least one career fair within an academic year that Career Planning and Placement sponsors on the campus of Grambling State University. Prior to each career fair, Mock Interview Sessions will be held for STEM majors.

Social Science Study - A research project will be implemented to determine the impact Scientific Identity has on a student selecting a STEM path. Science Self-Efficacy and Identity as a Scientist are directly linked to a person selecting a career in a STEM area. It is therefore important to understand these concepts and other related concepts associated with individual identity. Science Self-Efficacy can be defined as a student's belief in his/her ability to succeed in science classes, assignments, or activities. Science Self-Efficacy impacts how a student will persevere when faced with complications. It also affects their selection of science-related endeavors, the level of energy and exertion that they apply to those endeavors, and the overall level of accomplishment experienced within the science discipline. The identity of a scientist has been noted as developing early, often before the age of 14.

Mobile Science Demonstration Lab - To enhance the exposure that students who live in disenfranchised communities have to STEM, a *moving science lab* experience will be developed. The *Mobile Science Lab* will support students obtaining hands-on experience by engaging in science experiments that involve items that are nonhazardous. Communities that have a high minority population will be targeted during the summer months. It is possible that the Center of Excellence will partner with other entities to ensure that students that visit the *Mobile Science Lab* also receive a bag lunch. It is likely that this hands-on science opportunity will lead students, who would not normally consider a career in a STEM major, to a path that will support a productive STEM career.

5. *How will the Center provide and promote service to the greater community? How will its existence provide opportunities to improve the quality of life of Louisiana residents?*

The Center will continue to engage in activities that target the K-12 community. STEM faculty and STEM students will promote the value of science and technology to K-12 students. These K-12 students will have the opportunity to see GSU students who are being successful in a STEM major that come from their communities. Additionally the Center of Academic Excellence will serve communities via a *Mobile Science Demonstration Lab*. The communities targeted will be those that according to U.S. Census data are *persistent poverty* communities. Both of these types of outreach should have an impact on the number of citizens of Louisiana that enroll in college as well as the number pursuing and completing STEM degrees. This will directly improve the quality of life of residents.
Highlighted below are examples of K-12 outreach activities of STEM faculty and students.

- CMAST partnered with the Office of Academic Affairs to facilitate the summer **High Ability Program** from summer 2011-summer 2017 to about 140 participants. These honor students had completed their junior year of high school. Each student enrolled in two college courses (mathematics required). STEM faculty provided science training and collaborative group learning experiments for the students. Each student was also required to complete an individual research project and present their results via oral and poster presentation at the conclusion of the program.
- CMAST students joined the efforts of the **Chemistry club** to visit high schools in neighboring cities during national chemistry week from 2012-2015. The students performed science demonstrations and discussed the importance of STEM.
- CMAST collaborated with the Alpha Phi Alpha Fraternity, Inc. during spring 2018 for a STEM outreach project at **Lincoln Preparatory Elementary School**.
- STEM Learning Community Students encouraged underprivileged K-12 youth to seek careers in STEM at **Tallulah Charter School's Math Madness Week** and the **STEM Day hosted by J.S. Clark Magnet School**.
- CMAST students majoring in Computer Science assisted with the **summer 2015 Robotics Camp** for high school students and the **summer 2016 Robotics Camp** for middle school students.
- **Family Math Night**- Due to the success of Science Day at J.S. Clark Magnet School, CMAST students were asked to return back to J.S. Clark for their annual Family Math Night held on Tuesday, March 22, 2016. Eight (8) Grambling State University STEM students, with the assistance of one STEM faculty and the CMAST director, volunteered to attend. GSU students were able to engage both Pre-K through 6th grade students and their parents (approximately 150 participants).
- **Girls in Science Festival** - Twelve (12) Grambling State University STEM students, one STEM faculty and the CMAST director, volunteered to participate in the Girls in Science Festival sponsored by the National Association of University Women's South Central Sectional Conference for Youth at Grambling State University during the summer 2016. Around 50 girls ages 13-18 and adult women attended this event from neighboring cities and states.
- In July 2017, fourteen high school students (rising juniors & seniors) participated in a one week **Big Data Science Summer Program**. Three faculty from the Computer Science and Engineering Technology departments trained the students on basic programming using R-language and taught the students about how big data is used. Two college students assisted the participants with their daily projects. At the conclusion of the program, each student was required to do an oral presentation on the lessons learned during the camp. All students received a $400 stipend for participating in this camp. The **Big Data Science Camp** was restructured and offered for rising 8th, 9th, and 10th graders in June 2018. The 21 participants in the revised camp received more hands-on projects related to big data analysis. Projects were selected that gave participants the opportunity to see how big data is used in real life scenarios that are more relatable to them, such as: its use in social media, politics, music, health professions, disaster relief, sports and more. Daily guest speakers from different areas spoke about how data analytics is used in their field.

6. *How do the Center's education, training and/or research efforts further the economic development and workforce needs of the state? How will its programs focus on addressing current and projected workforce and economic development needs?*

The state of Louisiana recognizes the need to produce more STEM graduates and the need to increase the number of STEM graduates who are from underrepresented groups. **ACT 392** gave the Board of Regents the authority to establish the Louisiana Science Technology, Engineering, and Mathematics Education (LaSTEM) Advisory Council. The LaSTEM Advisory Council is working to address issues in the

state of Louisiana associated with STEM interest, STEM education and the STEM workforce. This council is working to identify strategies that will address the following data.

- In the past 10 years, growth in STEM jobs has been three times greater than non-STEM jobs.
- 80% of the fastest growing occupations in the US depend upon mastery of mathematics and scientific knowledge and skills.
- 58% of Louisiana's 4- and 5-Star Jobs are STEM-intensive jobs

A 2018 report that the LaSTEM Advisory Council's Workforce Subcommittee submitted to the Louisiana Legislature indicated "Louisiana cannot significantly increase the STEM workforce without also focusing on moving the needle for African Americans." The subcommittee's report also referenced a 2002 Educational Testing Service (ETS) Report titled "Meeting the Need." The ETS report indicates that it would be impossible to meet the nation's future economic needs without improving the math and science achievement of underrepresented minorities. The proposed GSU Center of Academic Excellence will support increasing the number of African American's in the state of Louisiana that earn a degree or credential in a STEM area. The Center will share with the community, on the regional and national level, best practices that support increasing the number of underrepresented groups that are prepared to meet the needs of the STEM workforce.

The Center for Mathematical Achievement in Science & Technology supports the key industries that have been identified for the state of Louisiana. These key industries include advanced manufacturing, software development, automotive industry, aerospace, agribusiness and energy. The Center for Mathematical Achievement in Science and Technology will create a pipeline of highly prepared STEM graduates that can meet the workforce needs of businesses located in the state of Louisiana. Data obtained from the Louisiana Workforce Commission related to *Long Term projections for 2016-2026* indicate several STEM areas for job growth. These areas include software development, engineering related areas, and biomedical sciences related areas. The Center of Academic Excellence will support producing graduates who are prepared to enter these *in demand* workforce areas.

7. *Provide specific evidence of collaboration with other entities.*

Louisiana Biomedical Research Network (LBRN) - The goal of LBRN is to expand biomedical training and research in the state of Louisiana. Two STEM faculty members have research projects that are supported by funding from LBRN. CMAST is leveraging resources provided by the Louisiana Biomedical Research Network to develop data science skills related to bioinformatics. Several students have completed courses that are being provided by LBRN.

Louisiana Economic Development (LED) - Grambling State University is partnering with LED to address workforce needs in areas that include software development and cybersecurity. LED will be working with the cybersecurity staff in the identification of professional development activities that will support faculty completing summer appointments with various companies.

Cyber Innovation Center - GSU is partnering with the Cyber Innovation Center via a grant award, to expand the cybersecurity training of teachers and high school students. As a part of a Cyber Innovation Center project, on June 27th Dr. Reddy with four GSU students trained 50 high school teachers in Denver Colorado on *Cybersecurity Fundamentals*.

A program was held on the campus of Grambling State University during the summer of 2019 that was sponsored by the Cyber Innovation Center. Seventeen students and four teachers participated in this program. Dr. Reddy has developed the first draft of a textbook that will support a one semester course devoted to the *foundations of cybersecurity*. This book will be made available to high school teachers.

Amazon Web Services - Grambling State University has been invited to be a part of a consortium that will focus on developing a cloud security training program. The training program will prepare students for entry level jobs in cloud security.

Cybersecurity Commission - Dr. Yenumula Reddy was appointed to the Louisiana Cybersecurity Commission in 2018. He is currently serving as co-chairs on two subcommittees. These subcommittees are *Workforce Development, Education*, and *Public Outreach and Information Sharing and Integration*.

Louisiana Space Grant Consortium (LaSPACE) - Dr. Matthew Ware serves as the LaSPACE coordinator for Grambling State University. LaSPACE is part of a nationwide organization that has a focus on promoting scientific research, workforce development, and public outreach that contribute to the mission of NASA. The LaSPACE program is managed by Louisiana State University. On May 22, 2019 an engineering technology professor, Mr. Elien Lane, travelled with GSU students to the Colombia Scientific Ballooning Facility located in Palestine Texas. Students were able to launch a payload that they had developed. The GSU student payload was designed to measure ozone, temperature, humidity and pressure as the research balloon rose.

AT&T - is partnering with Grambling State University by providing scholarship support for students pursuing the cybersecurity degree.

SodexoMagic - As part of a 5-year investment by Magic Johnson's SodexoMagic in Grambling State University, STEM NOLA announced the formation of STEM GRAMBLING. The STEM initiative is created on the successful community-focused New Orleans based STEM NOLA model that has engaged over 37,000 K-12 students and 10,000 families in hands-on Science, Technology, Engineering and Math (STEM) activities. STEM Grambling will leverage GSU's facilities, faculty and students to provide monthly STEM programming to expose, inspire and engage K-12 students from across the region to the broad spectrum of STEM disciplines that include cybersecurity.

Consortium for Innovation in Manufacturing and Materials (CiMM) - Grambling State University is a collaborating institution. CiMM targets strengthening the advanced manufacturing infrastructure in the state of Louisiana through research, K-12 outreach and workforce development and diversity.

Louisiana Universities Marine Consortium (LUMCON) - Dr. Kevin Roberson, Assistant Professor of Chemistry serves on the Advisory Council. LUMCON has a goal of increasing awareness of Coastal and Ocean issues associated with Louisiana. The Council also promotes research.

Purdue University - Dr. Deemer a faculty member at Purdue University has partnered with Grambling State University to study the reasons students select a STEM major and continue with the major. This Social Science research component will focus on understanding the impact the *Scientific Identity* of a student has on persistence.

NASA Glenn Research Laboratory - In direct response to the research interest of a chemistry major, the Center developed a proposal and received funding from the National Science Foundation. The project focused on Biodegradable Polymers. Polymers were synthesized by STEM students and their biodegradation properties characterized. NASA Glenn Scientist determined the molecular weight of the polymers as well at their thermal behavior.

8. *Advisory Board*

The **External Advisory Board** will play a role in the assessment of the Center. The membership of this board consists of individuals from industry and academic institutions. Individuals who have agreed to serve on this Board are Dr. Willie Rockward (Morgan State University), Dr. Curtis Banks (National Aeronautics Space Administration), Mr. Dennis Walker (National Geospatial Intelligence Agency), Mr. Joseph Cherry (General Dynamics) and Dr. Aryn Dotterer (Utah State University). This Board meets twice in an academic year. Additional members that represent key industries in the state of Louisiana will be added to the Advisory Board. The first meeting of this Board took place on March 21, 2019.

REFERENCES CITED

- "Fact Sheet: Spurring African-American STEM Degree Completion", March 16, 2016, U.S. Department of Education, 2016 [online]. Available: https://www.ed.gov/news/press-releases/fact-sheet-spurring-african-american-stem-degree-completion

- "Top 100 Degree Producers (2016)," Diverse Issues in Higher Education, 2016. [Online]. Available: http://diverseeducation.com/top100/.

- S. Fiegener, M.K., and Proudfoot, "Baccalaureate Origins of U.S.-trained S&E Doctorate Recipients," Arlington, VA, 2013

- "Big data: The next frontier for innovation, competition, and productivity", June 2011. [Online]. Available:https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/McKinsey%20Digital/Our%20Insights/Big%20data%20The%20next%20frontier%20for%20innovation/MGI_big_data_full_report.ashx

- LaSTEM Report, January 2018. [Online]. Available: https://lastem.regents.la.gov/wp-content/uploads/2019/01/2018-LaSTEM-Status-Report.pdf

F.   _Detailed Budget_

FY 2020

			TOTAL FOR EACH CATEGORY
Senior Personnel			$67,000
A. Key Individuals have been identified to support project activities			
i. One month summer salary for project leaders ($3,000 each, 4 faculty)		$12,000	
ii. Project Director will coordinate CMAST III activities		$55,000	
Other Personnel			**$26,000**
A. Faculty working with the Certificate Program (Summer, 2 faculty at $3,000 each)		$6,000	
B. Project Assistant		$20,000	
Fringe Benefits: 29% of Salaries ($12,000+$20,000+$55,000+$6,000 = $93,000)			**$26,970**
Travel (Faculty/Staff Conference and other Scientific Meetings)			**$15,000**
Participant Support Cost			**$216,000**
A. Stipend		$138,000	
i. 25 STEM students will receive $3,000 for research with faculty	$75,000		
ii. 2 Graduate Students will be involved in the Social Science Research Component	$3,000		
iii. 18 Undergraduate students	$60,000		
a. 6 will serve as academic coaches $24,000			
b. 12 will serve as peer tutors $36,000			
B. Travel (Student Conference and other Scientific Meetings)		$10,000	
C. Subsistence (supports soft skill seminars and other seminars)		$3,000	
D. Other		$65,000	
i. Scholarships for 9 students at $5,000/student	$45,000		
ii. Books for students in gatekeeper courses	$20,000		
Other Direct Costs			**$53,056**
A. Materials and Supplies		$29,800	
i. Soft Skills Training	$1,500		
ii. Gate Keeper Course/Certificate Program/Research Materials	$17,000		
iii. Social Science Materials	$1,000		
iv. Math/Physics Project Materials	$10,300		
B. Publication Costs		$5,000	
C. Consultant Services		$18,256	
i. External Evaluator	$15,256		
ii. Consultant for Social Science	$3,000		
Indirect Costs 48.25% of salaries and wages for non-Students			**$44,873**
		Total	**$448,899**

FY 2021

			TOTAL FOR EACH CATEGORY
Senior Personnel			$67,000
A. Key Individuals have been identified to support project activities			
i. One month summer salary for project leaders ($3,000 each, 4 faculty)		$12,000	
ii. Project Director will coordinate CMAST III activities		$55,000	
Other Personnel			**$26,000**
A. Faculty working with the Certificate Program (Summer, 2 faculty at $3,000 each)		$6,000	
B. Project Assistant		$20,000	
Fringe Benefits: 29% of Salaries			**$26,970**
($12,000+$20,000+$55,000+$6,000 = $93,000)			
Travel			**$15,000**
(Faculty/Staff Conference and other Scientific Meetings)			
Participant Support Cost			**$216,000**
A. Stipend		$138,000	
i. 25 STEM students will receive $3,000 for research with faculty	$75,000		
ii. 2 Graduate Students will be involved in the Social Science Research Component	$3,000		
iii. 18 Undergraduate students	$60,000		
a. 6 will serve as academic coaches	$24,000		
b. 12 will serve as peer tutors	$36,000		
B. Travel (Student Conference and other Scientific Meetings)		$10,000	
C. Subsistence (supports soft skill seminars and other seminars)		$3,000	
D. Other		$65,000	
i. Scholarships for 9 students at $5,000/student	$45,000		
ii. Books for students in gatekeeper courses	$20,000		
Other Direct Costs			**$53,475**
A. Materials and Supplies		$29,800	
i. Soft Skills Training	$5,000		
ii. Gate Keeper Course/Certificate Program/Research Materials	$14,300		
iii. Social Science Materials	$1,000		
iv. Math/Physics Project Materials	$9,500		
B. Publication Costs		$5,000	
C. Consultant Services		$18,675	
i. External Evaluator	$15,675		
ii. Consultant for Social Science	$3,000		
Indirect Costs 48.25% of salaries and wages for non-Students			**$44,873**
		Total	**$449,318**

			TOTAL FOR EACH CATEGORY
Senior Personnel			**$67,000**
A. Key Individuals have been identified to support project activities			
i. One month summer salary for project leaders ($3,000 each, 4 faculty)		$12,000	
ii. Project Director will coordinate CMAST III activities		$55,000	
Other Personnel			**$26,000**
A. Faculty working with the Certificate Program (Summer, 2 faculty at $3,000 each)		$6,000	
B. Project Assistant		$20,000	
Fringe Benefits: 29% of Salaries ($12,000+$20,000+$55,000+$6,000 = $93,000)			**$26,970**
Travel (Faculty/Staff Conference and other Scientific Meetings)			**$14,000**
Participant Support Cost			**$216,000**
A. Stipend		$138,000	
i. 25 STEM students will receive $3,000 for research with faculty	$75,000		
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iii. 18 Undergraduate students	$60,000		
a. 6 will serve as academic coaches	$24,000		
b. 12 will serve as peer tutors	$36,000		
B. Travel (Student Conference and other Scientific Meetings)		$10,000	
C. Subsistence (supports soft skill seminars and other seminars)		$3,000	
D. Other		$65,000	
i. Scholarships for 9 students at $5,000/student	$45,000		
ii. Books for students in gatekeeper courses	$20,000		
Other Direct Costs			**$53,495**
A. Materials and Supplies		$29,400	
i. Soft Skills Training	$5,000		
ii. Gate Keeper Course/Certificate Program/Research Materials	$13,570		
iii. Social Science Materials	$1,000		
iv. Math/Physics Project Materials	$9,830		
B. Publication Costs		$5,000	
C. Consultant Services		$19,095	
i. External Evaluator	$16,095		
ii. Consultant for Social Science	$3,000		
Indirect Costs 48.25% of salaries and wages for non-Students			**$44,873**
		Total	**$448,338**

G. *Letters of Support*

See the pages that follows

W. JAY LUNEAU
State Senator
District 29

711 Washington Street
Alexandria, LA 71301
Phone (318) 484-2285
Fax (318) 484-2287
luneauj@legis.la.gov

SENATE
STATE OF LOUISIANA

June 4, 2019

Marty J. Chabert, Chair
Louisiana Board of Regents
P.O. Box 3677
Baton Rouge, LA

Dear Mr. Chabert:

This letter is being written in support of Grambling State University's request for a STEM Center of Excellence. In 2005, Grambling State University received approval for the establishment of the Center for Mathematical Achievement in Science and Technology (CMAST). The University is seeking continuation of this Center of Excellence.

CMAST has an overall goal of supporting STEM workforce needs by preparing highly competitive graduates. The Center for Mathematical Achievement in Science and Technology allows faculty/staff at Grambling State University to engage in the systematic examination and improvement of instruction in mathematics, science, and engineering technology; thus addressing the retention of students. The Center promotes activities that focus on curriculum reform, undergraduate research, placement of students, K-12 outreach, and faculty professional development. A major focus is on providing an academic experience for STEM majors that keeps them engaged and connected to the profession beginning the freshman year.

Grambling State University has a history of producing highly prepared STEM graduates who have success in the workforce, as well as success in graduate and professional degree programs. The University is recognized in the *2018 Diverse Issues in Higher Education Top 100 Producers of African American Bachelor's Degrees* publication for producing STEM graduates. This recognition includes a ranking of 18th in producing graduates with degrees in the physical sciences, 20th for producing graduates with degrees in engineering technologies and engineering related fields and 53rd for computer and information sciences and support services degrees. These graduates are prepared to meet the workforce needs of key industries in the state of Louisiana, including software development, water management, manufacturing, aerospace, energy and automotive.

I highly recommend that the Center for Mathematical Achievement in Science and Technology be approved to continue as a Center of Excellence.

With the kindest personal regards, I remain.

W. Jay Luneau
Louisiana State Senator, District 29

WJL/vm

LOUISIANA HOUSE OF REPRESENTATIVES

700 North Main Street
P.O. Box 89
Homer, LA 71040
Phone: 318.927.2519
Fax: 318.927.6564
Email: jeffersonpo@legis.la.gov

Labor and Industrial Relations, Chair
Commerce

PATRICK O. JEFFERSON
State Representative ~ District 11

June 3, 2019

Marty J. Chabert, Chair
Louisiana Board of Regents
P.O. Box 3677
Baton Rouge, LA

Dear Mr. Chabert:

This letter is being written in support of Grambling State University's request for a STEM Center of Excellence. In 2005, Grambling State University received approval for the establishment of the Center for Mathematical Achievement in Science and Technology (CMAST). The University is seeking continuation of this Center of Excellence.

CMAST has an overall goal of supporting STEM workforce needs by preparing highly competitive graduates. The Center for Mathematical Achievement in Science and Technology allows faculty/staff at Grambling State University to engage in the systematic examination and improvement of instruction in mathematics, science, and engineering technology; thus addressing the retention of students. The Center promotes activities that focus on curriculum reform, undergraduate research, placement of students, K-12 outreach, and faculty professional development. A major focus is on providing an academic experience for STEM majors that keeps them engaged and connected to the profession beginning the freshman year.

Grambling State University has a history of producing highly prepared STEM graduates who have success in the workforce, as well as success in graduate and professional degree programs. The University is recognized in the *2018 Diverse Issues in Higher Education Top 100 Producers of African American Bachelor's Degrees* publication for producing STEM graduates. This recognition includes a ranking of 18th in producing graduates with degrees in the physical sciences, 20th for producing graduates with degrees in engineering technologies and engineering related fields and 53rd for computer and information sciences and support services degrees. These graduates are prepared to meet the workforce needs of key industries in the state of Louisiana, including software development, water management, manufacturing, aerospace, energy and automotive.

I highly recommend that the Center for Mathematical Achievement in Science and Technology be approved to continue as a Center of Excellence.

Sincerely,

Patrick O. Jefferson

GRAMBLING
University Foundation

Advancing GSU
for Excellence.

P.O. Box 587, Grambling, LA 71245
Telephone: 318.274.2217 Fax: 318.274.3330
www.gufoundation.org

June 5, 2019

Marty J. Chabert, Chair
Louisiana Board of Regents
P.O. Box 3677
Baton Rouge, LA

Dear Mr. Chabert:

This letter is being written in support of Grambling State University's request for a STEM Center of Excellence. In 2005, Grambling State University received approval for the establishment of the Center for Mathematical Achievement in Science and Technology (CMAST). The University is seeking continuation of this Center of Excellence.

CMAST has an overall goal of supporting STEM workforce needs by preparing highly competitive graduates. The Center for Mathematical Achievement in Science and Technology allows faculty/staff at Grambling State University to engage in the systematic examination and improvement of instruction in mathematics, science, and engineering technology; thus addressing the retention of students. The Center promotes activities that focus on curriculum reform, undergraduate research, placement of students, K-12 outreach, and faculty professional development. A major focus is on providing an academic experience for STEM majors that keeps them engaged and connected to the profession beginning the freshman year.

Grambling State University has a history of producing highly prepared STEM graduates who have success in the workforce, as well as success in graduate and professional degree programs. The University is recognized in the *2018 Diverse Issues in Higher Education Top 100 Producers of African American Bachelor's Degrees* publication for producing STEM graduates. This recognition includes a ranking of 18th in producing graduates with degrees in the physical sciences, 20th for producing graduates with degrees in engineering technologies and engineering related fields and 53rd for computer and information sciences and support services degrees. These graduates are prepared to meet the workforce needs of key industries in the state of Louisiana, including software development, water management, manufacturing, aerospace, energy and automotive.

I highly recommend that the Center for Mathematical Achievement in Science and Technology be approved to continue as a Center of Excellence.

Sincerely,

David J. Aubrey
Board Chairman

Item E.3.   **McNeese State University's** request for approval of a Proposal for a Doctor of Nursing Practice (DNP).

EXECUTIVE SUMMARY

McNeese State University requests approval of a Proposal for a Doctor of Nursing Practice (DNP). The Letter of Intent for this program concept was approved by the Board of Supervisors for the University of Louisiana System in October 2018 and, subsequently, by the Louisiana Board of Regents (BoR) in February 2019. As required by BoR policy, the graduate program proposal underwent review by an external consultant. Dr. Daniel Wesemann, Assistant (Clinical) Professor and Director of Psychiatric/Mental Health Nurse Practitioner Program, College of Nursing, University of Iowa, conducted the review. The reviewer supports the development of the proposed DNP and noted in his report that "the shortages of psychiatric/mental health providers persist across the United States and this proposed program will work to care for the vulnerable population of those with mental illness."

The intent of the proposed DNP is for post-master's nurse practitioners who are licensed in another population to be prepared as Psychiatric Mental Health Nurse Practitioners (PMHNP) while completing a practice-focused terminal degree. The primary objectives of the proposed DNP are to: (1) increase the number of doctoral-prepared psychiatric mental health practitioners in Louisiana and beyond; (2) improve access to mental health services in Louisiana; and (3) increase the number of doctoral-prepared psychiatric mental health faculty in Louisiana. The American Association of Colleges of Nursing (AACN) and the National Organization of Nurse Practitioner Faculty (NONPF) have embraced the landmark Institute of Medicine (IOM) reports, and have indicated that all advanced practice nurses should be moved from the master's level to doctoral level preparation within the next seven years (2025). The proposed practice doctorate will focus on clinical experiences that are innovative, integrative, and immersive in the added population of psychiatric advance practice nursing.

The 54-credit-hour proposed DNP, which also requires a total of 810 clinical hours and an additional 60 observational hours, will build on traditional master's programs that have provided the foundational practice competencies for the advanced practice registered nurse. These competencies will be expanded in evidence-based practice, quality improvement, and systems thinking among other key areas. New content for the psychiatric mental health advanced nurse practitioner curricula will include assessment and diagnostic concerns, psychotherapy, psychopharmacology, and three practicums. The proposed program will be an online hybrid program utilizing online learning environments when it can and requiring on-campus obligations only when needed. In addition, the proposed DNP will have a part-time option. This mode of delivery is advantageous both to the potential student and the community in which the advanced practice nurse practices.

The lack of behavioral health providers in Louisiana, the growing opioid epidemic, and an almost 30% increase in suicides demonstrates a critical need for psychiatric mental health professionals. Compounding this issue is the fact that there is a significant nursing faculty shortage which limits admissions to nursing programs at the same time as the need for professional registered nurses continues to grow. Of the six existing DNP programs currently offered in Louisiana, none specializes in the psychiatric population. Graduates of the program proposed by McNeese would help to address the growing shortage of psychiatric mental health professionals working in inpatient and outpatient settings as well as produce individuals qualified to fill faculty positions.

McNeese's College of Nursing has a long and rich history to which the DNP would be a natural extension. The University offers a Bachelor of Science in Nursing which produces on average 134 graduates annually. In addition, it is a member of the Intercollegiate Consortium for a Master of Science in Nursing (ICMSN) along with Southeastern Louisiana University, UL Lafayette, and Nicholls State University. Within the ICMSN, McNeese maintains the highest enrollment numbers for both master's and post master's psychiatric mental health advanced nursing practice concentration. Building on existing faculty and staff, along with the strength of College of Nursing, McNeese can offer the proposed program in a reasonable time frame with some associated startup costs. Program implementation will require three new faculty with one hired each year for the first three years along with clinical adjuncts being added in YR3 and YR4.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves McNeese State University's request for approval of a Proposal for a Doctor of Nursing Practice (DNP).

MCNEESE
STATE UNIVERSITY
A Member of the University of Louisiana System.

Office of the President
DR. DARYL V. BURCKEL
EXCELLENCE WITH A PERSONAL TOUCH

E 3

August 1, 2019

Dr. James B. Henderson, President
University of Louisiana System
1201 North Third Street
Suite 7-300
Baton Rouge, LA 70802

Dear Dr. Henderson:

Enclosed are copies of McNeese State University's request for approval to offer a new academic program, Doctor of Nursing Practice (DNP).

Please place this item on the ULS Board of Supervisors' agenda for consideration and approval at the August 22, 2019 meeting.

Thank you for your attention in this matter.

Sincerely,

Dr. Daryl V. Burckel
President

Enclosures

MCNEESE
STATE UNIVERSITY
A Member of the University of Louisiana System

Office of the President
DR. DARYL V. BURCKEL
EXCELLENCE WITH A PERSONAL TOUCH

July 26, 2019

Dr. James B Henderson, President
University of Louisiana System
1201 North Third Street, Suite 7-300
Baton Rouge, LA 70802

Dear Dr. Henderson,

I request approval to offer a doctorate in nursing practice (DNP) in the field of advanced practice psychiatric mental health (PMH) nursing, effective fall 2020 semester. The program will be delivered in an online format and is designed for Advanced Practice Registered Nurses (APRN), who are certified and licensed in another patient population (ie – Family Nurse Practitioner) who wish to add the additional education and training in advanced practice PMH nursing and obtain a non-research practice doctorate.

The American Association of Colleges of Nursing (AACN) and the National Organization of Nurse Practitioner Faculty (NONPF) have embraced the landmark Institute of Medicine (IOM) reports, and have indicated that all advanced practice nurses should be moved from master's level to doctoral level preparation within the next seven years (2026). This practice doctorate focuses on clinical experiences that are innovative, integrative and immersive in the added population of psychiatric advanced practice nursing. This aligns well with McNeese's nursing and health professions college mission and supports the institution's role, scope and mission. Among the six DNP programs currently offered in Louisiana, none specialize in the psychiatric population. The lack of behavioral health providers in Louisiana, the growing opioid epidemic, and an almost 30% increase in suicides demonstrates a critical need for these providers.

McNeese can offer this program in a reasonable time frame with some associated startup costs that are detailed in the attached letter of intent. It will require the hiring of one additional 12 month faculty initially and the further addition of a nine month faculty within the year. An informal survey of previous McNeese APRN graduates who are members of the College of Nursing and Health Profession's two facebook groups indicated 18 students who would be interested in this type of program within the first four days of the posting.

The full proposal for the doctor in nursing practice degree is attached.

Thank you for your consideration.

Regards,

Dr. Daryl V. Burckel
President

MEMORANDUM

TO: Dr. Daryl Burckel, President

FROM: Dr. Mitch Adrian, Provost/Vice President
Academic and Enrollment Management

DATE: July 25, 2019

SUBJECT: Doctorate in Nursing Practice (DNP) Program for Fall 2020 Semester

I recommend your approval to offer a doctorate in nursing practice (DNP) in the field of advanced practice psychiatric mental health (PMH) nursing, effective fall 2020 semester. The program is designed for Advanced Practice Registered Nurses (APRN), who are certified and licensed in another patient population (ie – Family Nurse Practitioner) who wish to add the additional education and training in advanced practice PMH nursing and obtain a non-research practice doctorate.

The American Association of Colleges of Nursing (AACN) and the National Organization of Nurse Practitioner Faculty (NONPF) have embraced the landmark Institute of Medicine (IOM) reports, and have indicated that all advanced practice nurses should be moved from master's level to doctoral level preparation within the next seven years (2026). This aligns well with McNeese's nursing and health professions college mission and supports the institution's role, scope and mission. Among the six DNP programs currently offered in Louisiana, none specialize in the psychiatric population. The lack of behavioral health providers in Louisiana, the growing opioid epidemic, and an almost 30% increase in suicides demonstrates a critical need for these providers.

McNeese can offer this program in a reasonable time frame with some associated startup costs that are detailed in the attached letter of intent. It will require the hiring of one additional 12 month faculty initially and the further addition of a nine month faculty within the year. An informal survey of previous McNeese APRN graduates who are members of the College of Nursing and Health Profession's two facebook groups indicated 18 students who would be interested in this type of program within the first four days of the posting.

Thank you for your consideration.

AA 2.05: REQUEST FOR AUTHORITY TO OFFER A NEW DEGREE PROGRAM*

-- Including incremental credentials building up to the Degree --

* Prior to final action by the Board of Regents, no institution may initiate or publicize a new program. *

Date:

Institution: **McNeese State University**	Requested <u>CIP, Designation, Subject/Title:</u> CIP 51.3810, DNP, Psychiatric/Mental Health)

Contact Person & Contact Info: Peggy L. Wolfe, PhD, RN
Date BoR approved the Letter of Intent: February 27, 2019 (See Appendix 2)
Date Governing Board approved this Proposal:
Planned Semester/Term & Year to Begin Offering Program: Fall 2020
Program Delivery Site (s): McNeese State University Lake Charles, Louisiana

1. Program Description

Describe the program concept: (a) <u>purpose and objectives</u>; and (b) list learning outcomes for the proposed program, i.e., what students are expected to know and be able to do upon completion of the program. Be as specific as possible.

Demand for advanced practice nurses began almost twenty years ago in response to several landmark Institute of Medicine (IOM) [now called the National Academy of Medicine] reports including *Crossing the Quality Chasm* (1999) that called for a restructuring of the entire health care system and the best use of its resources and *To Err Is Human* (2001). A follow-up 2005 report titled *Advancing the Nation's Health Needs: NIH Resource Training Programs* (The National Academy of Sciences) called for the development of a "non-research clinical doctorate to prepare expert practitioners who can also serve as clinical faculty." Grounded in these reports is strong evidence that there is an exponential growth in clinical practice knowledge, increased complexity in patient care, and national concerns for the quality of care and patient safety. Research from Drs. Linda Aiken, Carol Estabrooks, Christopher Friese, and others have established a clear link between higher levels of nursing education and better patient outcomes (American Association of Colleges of Nursing, 2011).

In 2004, the American Association Colleges of Nursing (AACN) produced its Position Statement on the Practice Doctorate in Nursing. The statement was a response to the growing support for the Doctorate of Nursing Practice (DNP) and called for moving the current level of preparation necessary for advanced nursing practice from the master's level to the doctorate-level by the year 2015.The Doctorate of Nursing Practice (DNP) is practice-focused, rather than research-focused and is designed for nurses seeking a terminal degree as an advanced practice registered nurse (APRN). In *The Essentials of Doctoral Education for Advanced Practice Nursing* (AACN, 2006), DNP curricula "focus heavily on practice that is innovative and evidence-based, reflecting the application of credible research findings"....with emphasis given to "integrative practice experiences and an intense practice immersion experience."

In 2008, the Robert Wood Johnson Foundation (RWJF) and the IOM appointed the committee on the RWJF Initiative on the Future of Nursing to make recommendations for an action-oriented plan for the future of nursing. Three of the four key recommendations included the expectation that nurses should:
1. practice to the full extent of their education and practice;
2. achieve higher levels of education and training through an improved education system that promotes seamless academic progression; and
3. be full partners, with physicians and other health care professionals in redesigning health care in the United States.

Since the AACN (2004) adoption of the DNP as the entry level educational preparation for APRNs by 2015, the most prevalent DNP pathway has been for the post-master's doctorate; however, the emergence of

the post-baccalaureate to DNP is gaining momentum. In the past nine years, the growth of doctoral nursing programs has grown 83% in the American Association Colleges of Nursing (AACN) member institutions of which MSU is a member (AACN, 2017). Of these programs the number preparing psychiatric/mental health nurse practitioners is one of the smallest or 18.9 % (AACN, 2017).

This proposal proposes the initiation of a DNP Program for post-master's nurse practitioners who are licensed in another population to be prepared as Psychiatric Mental Health Nurse Practitioners (PMHNP) while completing a Doctorate in Nursing Practice. This program is based on the increasing need/demand for Family Nurse Practitioner (FNP), Adult/Geriatric Nurse Practitioner (AGNP), Neonatal Nurse Practitioner (NNP), Pediatric Nurse Practitioner (PNP), Women's Health Nurse Practitioner (WHNP), and population specific Psychiatric Mental Health Clinical Nurse Specialist (CNS) with prescriptive authority to achieve additional certification as a PMHNP.

The curricula will build on the foundational advanced practice nurse practitioner competencies achieved in initial population certification and add both psychiatric mental health competencies as well as the higher level, expanded competencies defined in the *AACN The Essentials of Doctoral Education for Advanced Nursing Practice, (*2006). A second pathway, the post-baccalaureate to DNP, will be offered as the demand shifts from post-master's prepared APRNs to predominately baccalaureate graduates seeking advanced practice preparation.

The primary purpose(s) of this proposal are to:
1. increase the number of doctoral-prepared psychiatric mental health nurse practitioners   (PMHNPs) in Louisiana and beyond;
2. improve access to mental health services in Louisiana; and
3. increase the number of doctoral-prepared psychiatric mental health faculty in Louisiana.

Graduates of the DNP Program will be able to:
1. Practice as experts using knowledge from the natural and social sciences, information technology, health care policy and ethics to provide evidence-based care for patients, families, and populations.
2. Use translational science, data analytic skills and quality improvement methodologies to develop as scholars and improve nursing science.
3. Use effective communication and collaboration to lead and influence interprofessional and intraprofessional teams to improve health care safety and quality.
4. Develop leadership skills to develop, analyze, and shape health policy within healthcare and nursing arenas that is equitable, ethical, and fair.
5. Provide leadership to improve clinical prevention and population health.
6. Manage micro and macro systems level data to develop, implement, and evaluate health care outcomes that are sensitive to diverse groups, accountable for patient safety, and which improve overall quality of care.

Map out the proposed curriculum, including course credits and contact hours (if applicable). Identify any incremental credentials and/or concentrations within the degree. Indicate which courses will be new. Describe plan for developing and offering new courses as well as any special program requirements (e.g., internships, comprehensive exam, thesis, etc.).

MSU proposes a dual pathway, The Post Master's Certificate – PMHNP DNP. Students will enter the program already having been prepared as MSN advanced practice nurses and, upon graduation, earn completion of psychiatric mental health courses that lead to certification in a new population, psychiatric mental health, and an earned doctorate as a psychiatric mental health advanced nurse practitioner. The proposed curriculum is built upon traditional master's programs that have provided the foundational practice competencies for the advanced practice registered nurse. These competencies are expanded in evidence-based practice, quality improvement, and systems thinking among other key areas. New content

for the psychiatric mental health advanced nursing practice curricula will include assessment and diagnostic concerns, psychotherapy, psychopharmacology and three practicums. The additional courses would be based on the required AACN DNP of content for doctoral education for advanced nursing practice as well as the National Organization of Nurse Practitioner Faculty (NONPF) competencies.

The required AACN DNP Essentials include:
1. scientific underpinnings for practice;
2. organizational and system leadership/management, quality improvement and system thinking;
3. clinical scholarship and analytical methods for evidence-based practice;
4. informational systems/technology and patient care technology for the improvements and transformation of health care;
5. health care policy for advocacy in health care;
6. interprofessional collaboration for improving patient and population healthcare outcome;
7. clinical prevention and population health for improving patient and population health outcomes; and
8. advanced nursing practice.

The program would be an online hybrid program. Students will be required to be present on campus for face-to-face contact at least once a semester for a one to two day intensive educational experience. The primary focus will be on completion of required courses to sit for national certification as a PMHNP and completion of courses focused on the doctorate nursing practice essentials including the development of required clinical projects. Table 1 depicts the proposed curriculum.

Table 1
PMC PMHNP DNP – Program Plan – Part-Time

Semester	Course Title	Credits	DNP Essential
Fall Year 1	Applied Biostatistics for Evidence Based Practice *	3	Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health
	Evidence-Based Practice : Underlying Elements of Evidence *	3	Essential 1: Scientific Underpinnings
	Total	**6**	
Semester	Course Title	Credits	DNP Essential
Spring Year 1	Healthcare Information Technology for the APN *	3	Essential IV: Information Systems/Technology and Patient Care for Improvement and Transformation of HC
	Epidemiology *	3	Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health
	Total	**6**	

Semester	Course Title	Credits	DNP Essential
Summer Year 1	Quality and Safety Across Healthcare Systems *	2	Essential II: Organizational and Systems Leadership for QI and Systems Thinking
	Analytical Methods for Translating Research into Practice *	3	Essential III: Clinical Scholarship and Analytical Methods for EBP
	Legal and Ethical Practice *	3	Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes
	Total	**8**	

Semester	Course Title	Credits	DNP Essential
Fall Year 2	Organizational and Healthcare Systems Leadership *	3	Essential II: Organizational and Systems Leadership for QI and Systems Thinking
	NURS 608: Diagnostic Considerations and Psychopharmacology	3	Essential VIII:
	Total	**6**	

Semester	Course Title	Credits	DNP Essential
Spring Year 2	NURS 690: Psychotherapy for the PMHNP (60 observation hours)	3	Essential VIII:
	Interprofessional Collaboration and Population Outcomes *	3	Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes Essential VII: Clinical Prevention and Population Health for Improving the Nation
	Total	**6**	

Semester	Course Title	Credits	DNP Essential
Summer Year 2	Clinical Scholarship for Evidence Based Practice I (100 Project Hours) *	2	Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice
	Health Care Policy for Advocacy in Health Care *	2	Essential V: Health Care Policy for Advocacy in Health Care
	NURS 691: APN PMH NP I (180 clinical hours)	5	Essential VIII:
	Total	**9**	

Semester	Course Title	Credits	DNP Essential
Fall Year 3	Clinical Scholarship for Evidence Based Practice II (100 Project Hours) *	2	Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice
	NURS 692: APN PMH NP II (210 clinical hours)	5	Essential VIII:
	Total	**7**	

Semester	Course Title	Credits	DNP Essential
Spring Year 3	Clinical Scholarship for Evidence Based Practice III (100 Project Hours) *	2	Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice
	NURS 697: APN PMH NP III (120 clinical hours)	4	Essential VIII:
	Total	**6**	

TOTAL CREDITS: 54

Psychiatric Mental Health Advance Practice Nursing Competencies: 20

DNP Essentials: 34

Total Clinical Hours: 810

*Indicates New Courses
Course Development Plan:
Course development will begin immediately following the ULS and BOR program approval. This will allow submission of an application and required course syllabi to the Louisiana Board of Nursing in the summer of 2019. All materials must be submitted at least 60 days prior to action by the LSBN Education Committee during their fall 2019 meeting.

Five of the eighteen required courses have been developed and are the required psychiatric mental health courses necessary to sit for national certification as a Psychiatric Mental Health Advanced Nurse Practitioner. The remaining thirteen courses will be developed by Dr. Sattaria Dilks and current DNP faculty in consultation with Dr. Dawn Vanderhoef, PhD, DNP, PMHNP-BC, PMHCNS-BC, Director of PMHNP Nurse Specialty at Vanderbilt University.

Each course will reflect clear statements of expected student outcomes that are congruent with the program outcomes. Final evidence of successful completion of the curriculum is a written evidence-based clinical project demonstrating mastery of key *AACN DNP Essentials*. These projects will be directly linked to behavioral health disorders.

The total credits required to earn a Post Master's PMHNP DNP is 54 credits and include a total of 810 clinical hours. An additional 60 observational hours must be completed in the NURS 690 Psychotherapy for PMHNP.

Identify any embedded Industry-Based Certifications (IBCs). Describe process for student to earn/receive the IBC.

The DNP program proposed by MSU offers already certified advanced practice nurses the opportunity to add a new national certification with a new population, i.e., psychiatric mental health.

Program Delivery (Courses): To what extent must a student come to the campus to complete this program, including orientation or any face-to-face meetings?

☐ On-site (>50% delivered face-to-face)	☑ Hybrid (51%-99% online)	☐ Online (100% online)
☐ Day courses offered	☐ Evening courses offered	☐ Weekend courses offered

2. Need
How is this program essential for the wellbeing of the state, region, or academy (e.g., how is it relevant, how does it contribute to economic development or relate to current/evolving needs).

Critical Behavioral Health Needs:
Two growing and profound behavioral health disorders, suicide and the opioid crisis, have reached staggering levels with no clearly defined resolution in the near future. According to the latest statistics from the Centers for Disease Control and Prevention (CDC, 2018), suicide is the tenth leading cause of death in the United States and has increased in nearly every state from 1999 through 2016 by 30%. The nation as a whole with the exception of one state, Nevada, saw increased suicide rates. Even with the 1% drop of suicide in that state, suicide remained the ninth highest in deaths due to suicide. Additionally, more than half of people (54%) who died by suicide did not have a known mental health condition (https://www.cdc/gov/vitalsigns/suicide/idex.html). Suicide is the tenth leading cause of death in the United States and is one of just three leading causes that are increasing. The US military experienced an 80% rise in suicide rates between 2004 and 2008, and a Veterans Administration report released in 2016 indicated that there were 20 veterans a day who committed suicide (https://www/va.gov/opa/pressrel/includes/viewPDF.cfm?id=5114).

According to the June 2018 CDC report, Louisiana saw an increase in suicide rates of 29.3% between 1999 and 2016. In 2016, Louisiana ranked 27th for self-harm related deaths (suicides) among all states at 15.6

deaths per 100,000 people, an increase from 14.7 deaths the previous year. This number is 11.6% higher than that of the US rate of 13.7 deaths per 100,000 people, but is comparable to other southern states. The rate in Calcasieu Parish for intentional self-harm is even more alarming at 19.9% for 2017 (*Louisiana Health Report Card,* Department of Health and Hospitals) and represents the second highest in the state. The second, equally devastating, behavioral health disorder is substance abuse of opioids and the growing incidence of deaths from overdoses. In 2018 Dr. Jerome Adams, Surgeon General of the United States Public Health Service, identified the opioid epidemic as one of the top foci for his office. The number of deaths related to opiate overdose (both prescribed and obtained illegally) doubled between 2010 and 2016 (https://surgeongeneral.gov/priorities/opioid-overdose-prevention/naloxone-advisory.html). Opioids—prescription and illicit—are the main driver of drug overdose deaths in the United States comprising 63.1% of all drug overdose deaths in 2015. Nationwide for 2016, it is estimated that 64,000 deaths involved opioids. (*Morbidity and Mortality Weekly Report,* Kanter, et.al., March 9, 2018). In 2016, Louisiana ranked 32nd in overall drug-related deaths in the United States. The number of opioid-related deaths in Louisiana is increasing, with a 47.5% increase in total opioid deaths between 2014 and 2016 (*Louisiana Health Report Card*, Department of Health and Hospitals, 2017.)

Further complicating the mental health report of Louisiana citizens is the recent evidence demonstrating that the state is being pushed to do a better job caring and treating its mentally ill, especially those who may not belong in nursing homes and children who attend alternative schools. An investigation of nursing homes in 2016 documented at least 3,800 people or 14.5 % of all nursing home residents were mentally ill. This represents one of the highest percentages of adults with serious mental illnesses in the US and is in violation of the Americans for Disabilities Act. As relates to children, a report by a 39-member panel of school superintendents and others last year said school officials are too quick to toss students with behavior problems in alternative schools when most of them fail to get the help they need. (American Press, September 25, 2018)

LOUISIANA WORKFORCE COMMISSION STAR LEVEL (http://www.laworks.net/Stars/)

☑ 5 Stars ☐ 4 Stars ☐ 3 Stars ☐ 2 Stars ☐ 1 Star

Describe how the program will further the mission of the institution.

Program Fit Within MSU Existing Role, Scope and Mission
McNeese State University's PMHNP/DNP program will further the mission of the institution through an emphasis on in-depth disciplinary knowledge that can be applied to the health and the well-being of its community. The graduates of this program will be prepared at the highest level to address critical behavioral health issues impacting the quality of life for all citizens of our state. It is critical that action be taken at a number of levels to eradicate the threats now facing all of Louisiana regardless of age, race, or social-economic level. Doctorate-prepared PMHNPs bring unique skills to the behavioral health crisis facing our state and can complement the team-based approach to care for many patients with complex comorbid medical and behavioral health problems.

APRNs who hold dual certification can also be especially valuable for patients with co-occurring medical conditions and can effectively liaise with primary care and specialty care providers to coordinate care involving more complex medical conditions. The National Institute of Medicine encourages the provision of behavioral health services that are co-located with primary health care. Nurse Practitioners, who are dually certified as Psychiatric Mental Health Nurse Practitioners (PMHNP's), offer an opportunity to provide both types of services to the residents of Louisiana.

Identify similar programs in the State and explain why the proposed one is needed: present an argument for a new or additional program of this type and how it will be distinct from existing offerings.

1. **Similar Programs Offered at Other Louisiana Institutions:**

Currently there are six DNP programs admitting students located in Louisiana. Five of the programs are public, state supported institutions located primarily in the southeast corridor of the state and one in the northern part of the state. The public programs are Louisiana State University, Northwestern State University, Southeastern Louisiana University, Southern University, and the University of Louisiana at Lafayette. The sixth program, Loyola University, is private and also located in the southeast region of the state. There are no current programs located in the southwest region of Louisiana and the contiguous southeast region of Texas that offer a DNP Program. The closest Texas DNP programs are in Houston, TX at Baylor and the University of Texas Health Science Center in Houston, neither of which offer a specialization in psychiatric populations.

McNeese State University is a member of the Intercollegiate Consortium for a Master of Science in Nursing (ICMSN) and jointly offers a Master of Science in Nursing with concentrations in nursing education and advanced practice nursing (Family Nurse Practitioner (FNP) and Psychiatric Mental Health Nurse Practitioner (PMHNP). Three of the four-member institutions (McNeese State University, Nicholls State University, and Southeastern Louisiana University) offer a concentration in the PMHNP. Two of the four-member institutions (McNeese State University and Southeastern Louisiana University) offer a post-master's certificate in psychiatric mental health nursing advanced practice. The fourth member, the University of Louisiana at Lafayette does not participate in the PMHNP concentration at any level.

The intent of the MSU PMHNP program represents a unique departure from the DNP programs offered by the current DNP Programs including SELU and ULL. These programs prepare students to earn an initial advanced nursing practice certification with a specific population in either a BSN-DNP or an MSN-DNP. SELU additionally offers a post-master's psychiatric mental health program but it is not offered concurrently with a DNP program. The DNP program proposed by MSU offers already certified **advanced practice nurses** the opportunity to add a new population, i.e., psychiatric mental health and a DNP degree (refer to Table 1 Sample Part-Time Plan). Courses are offered concurrently through a dual pathway that prepares graduates to earn certification in a new population, psychiatric mental health, and expand their treatment competencies. An example is women's health nurse practitioners who may be more able to treat both the behavioral health and physiological needs of their patients. The McNeese CONHP, PMC PMHNP DNP program (dual pathway) is not currently offered by any other academic institution in the state.

Specific population based psychiatric mental health courses will be drawn from the existing ICMSN courses that SELU offers to their BSN-DNP and MSN-DNP in the psychiatric mental health concentration. The University of Louisiana at Lafayette follows the same practice using ICMSN-based family nurse practitioner courses. In that respect, collaboration will continue among the ICMSN members.

The specific program identity for the proposed MSU program is a post-master's DNP designated as DNP, Psychiatric Mental Health Nursing (51.3810).

1. **Need for Additional Program**

The proposed PMC PMHNP DNP offering by McNeese College of Nursing and Health Professions has the potential to address the state behavioral health workforce shortage, and provide targeted education and clinical experiences to treat youth, as well as those with substance use disorders. A long-range goal is to increase access to quality mental health care, and decrease suicide rates. As noted in Dr. Dawn Vanderhoef's consultation report, "The benefits of the McNeese PMC PMHNP DNP program are multifaceted. First, the program will educate PMHNP's at the highest level, which is consistent with the

NONPF's statement that the DNP is the entry into advance practice nursing. This program places McNeese and LA PMHNP's at the forefront of APRN education. A strategic decision to offer the PMC PMHNP DNP on a part-time basis, is intentionally targeting those who would enroll in this program. Most students who apply to the current PMC PMHNP program are employed full-time and have multiple family responsibilities that necessitate a part time program. A part time program plan is setting the student up for success. Second, the program will be offered as an online hybrid, allowing increased access by all APRN's in the state. Additionally, the tuition cost is affordable, making McNeese an attractive option to obtain a DNP."

A full-time curriculum will be available in the future if that is preferred by students. The proposed curriculum integrates DNP level essentials with the PMHNP competencies, and has an increased number of direct clinical hours. The increase in clinical hours allows for additional targeted clinical experiences working with youth and adults who have substance use disorders, preparing the highest level of PMHNP with the knowledge, skills, and abilities to leave McNeese as a practice ready clinician armed to address LA's mental health needs. For example, these students will have additional training in trauma, suicide prevention, and treatment of substance use disorder. McNeese graduates will have completed the preparation required to apply for a medication assisted treatment (MAT) waiver, preparing the PMHNP to treat opioid use disorders with evidence-based treatments.

If approved, will the program result in the termination or phasing out of existing programs? Explain.

The enrollment in the current Post Masters Psychiatric Mental Health program will be monitored closely and decreased as enrollment increases in the proposed Psychiatric Mental Health DNP program.

If a Graduate program, cite any pertinent studies or national/state trends indicating need for more graduates in the field. Address possibilities for cooperative programs or collaboration with other institution(s).

Critical Education Need: Psychiatric Mental Health Practitioners
National:
An increasing demand for psychiatric services is occurring at the same time that there is a growing shortage of psychiatric mental health professionals working in outpatient and inpatient settings. The lack of access has created a crisis throughout the U.S. health care system that is harmful and frustrating for patients, their families and other health care providers, and is becoming increasingly expensive for payers and society at large.

State/Regional:
The Department of Health and Hospitals Report (2015) indicates that Louisiana has a severe shortage of mental health providers with only five parishes demonstrating appropriate access to mental healthcare. The rest of the state including all of the parishes in Southwest Louisiana are designated as mental health provider shortage areas (http://ldh.la.gov/assets/oph/prch/HPSAMaps/HPSA_Mental_Shortages). According to the Louisiana State Board of Nursing Annual Report 2017, of the 4,959 advanced practice registered Nurses who renewed their license. Only 4% identified their specialty as psychiatric-mental health/substance abuse.

Hospital Emergency and Inpatient Departments:
Treatment of behavioral health issues in Emergency Departments (EDs) can lead to poor outcomes and care experiences for individuals and families. ED staff are overburdened causing disruption of flow in the ED that raises costs for health systems. In hospital EDs lack of access to psychiatric services stands out among all other medical diagnoses, averaging up to 18 hours for some dispositions. The resulting extended waits impacts the full scope of care in the ED that, at times, can reduce access in the ED for more acute medical patients and lead to poorer outcomes for psychiatric patients. The shrinking number of inpatient psychiatric services has become a significant obstacle to improved access to care. Beds have been eliminated due to lower rates of reimbursement compared to medical surgical procedures and due to difficulty recruiting psychiatrists to staff the inpatient units. (Institute for Healthcare Improvement, 2018)

Criminal justice settings:
According to the National Alliance for Mental Illness (NAMI) two million people with mental illness are booked into jails each year, with 15% of men and 30% of women in jail having a serious mental illness. (https://www.nami.org/Learn-More/Public-Policy/Jailing-People-with-Mental-Illness) NAMI reports that incarcerated mentally ill people are likely to have longer periods of incarceration than their non-mentally ill counterparts and 83% of jail inmates with a mental illness do not have access to the needed treatment. Louisiana has one of the nation's highest rates of incarceration. According to Dr. Raman Singh, Director of Medical and Behavioral health for the Louisiana Department of Public Safety and Corrections, "Louisiana's incarceration rate contributes to overrepresentation of the mentally ill in the criminal justice system." (http://thepsychologytimes.com/2017/07/26/behavioral-health-key-to-louisianas-problems-in-corrections-says-director-2/) He further noted that greater than 40% of the mentally ill have been arrested, with the majority being for minor offenses and there are a lack of programs/providers to address the issues of mental illness and substance abuse which drive the criminal behaviors.

Outpatient Settings:
The pool of psychiatrists declined by 10 % from 2003-2013. Psychiatry is the only medical specialty other than primary care in which the Association of American Medical Colleges has identified a physician shortfall and that deficit will get progressively worse by 2025. The aging of the current workforce, low rates of reimbursement, burnout, burdensome documentation requirements and restrictive regulations around sharing clinical information necessary to coordinate care are some of the reasons for the shrinkage. Moreover, the workforce is unevenly distributed geographically across the country. Seventy-seven percent of US counties are underserved and 55 % of states have a "serious shortage" of child and adolescent psychiatrists. Even in urban and suburban geographic areas with adequate ratios of psychiatrists, the supply of psychiatrists who work in inpatient and outpatient psychiatric facilities has been reduced by psychiatrists who practice exclusively in cash-only private practices. These practitioners now make up 40 % of the workforce, the second highest among medical specialties after dermatologists. (USDHHS, HRSA Health Workforce, 2016)

Lack of Doctorate-Prepared Psychiatric Mental Health Faculty
National:
The American Association of Colleges of Nursing (AACN), 2017 has identified a nursing faculty shortage across the country that has limited admissions to nursing programs at the same time as the need for professional registered nurses continues to grow. The American Nurses Association has also confirmed the growing shortage of faculty noting that the U.S. Department of Labor Bureau of Statistics Employment Projections for 2012-2022 predicts there will be a need for 35 % more faculty to meet the demand for nurses (March, 2014). The most recent *AACN 2018-2019 Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing* indicates that the majority of enrollment and graduations in both post–Baccalaureate DNP Programs and Post-Master's DNP Programs are in populations other than psychiatric mental health. There were approximately 30% in the post-Baccalaureate DNP Programs and 42% in Post-Master's DNP Programs.

State/Regional:
In 2017, a total of 1, 406 qualified applicants to Louisiana's pre-RN programs were denied admission (LSBN Annual Report, 2017) to RN nursing programs. An analysis of the last four LSBN Annual Reports (2014-2017) demonstrated that the top three reasons given by the Deans and Directors as to why qualified applicants were not admitted were: no budgeted faculty positions; non-competitive faculty salary; and unavailable qualified faculty. Between the years 2012-2016 there was a 44% increase in the number of vacant faculty positions, a 17% increase in the number of faculty resignations; and a 3%- point increase in the nurse faculty vacancy rate (4.5% in 2012 to 7.5% in 2016). Seventy-six percent of the faculty teaching

in Louisiana's graduate nursing programs held an earned doctorate in nursing or a related field. Of these there was a 33% increase in the number of DNP prepared faculty teaching in undergraduate and a 91% increase over the last three years for graduate programs. Over half (55%) of the faculty teaching in graduate nursing program in Louisiana were 51 years and over in 2016-2017 and 27% were 61 years and older. *(Louisiana's Multi-Regional Statewide Nursing Workforce Forecasting Model 2014 Update,* Louisiana State Board of Nursing, Louisiana Center for Nursing, 2018)

A significant nursing faculty shortage exist in the psychiatric-mental health specialty area. Although the majority of faculty data are not reported by specialty, anecdotal information with statewide colleagues has indicated many colleges/schools of nursing in the state of Louisiana are having difficulty recruiting psychiatric-mental health faculty.

Collaboration with other institutions:
McNeese will continue to participate as a member of the Intercollegiate Consortium for a Master of Science in Nursing (ICMSN) and jointly offer the current psychiatric mental health courses required to complete prior to applying for national certification.

McNeese State University discussed the proposed PMHNP/DNP with each of the ICMSN member institution deans and a second time with the Council of the Intercollegiate Nursing Consortium (CINC) composed of ICMSN Deans and Vice-Presidents inviting their participation in the proposed program. None of the three members indicated interest in pursuing a collaboration for the PMHNP/DNP program. Lack of resources was the primary reason offered by two of the ICMSN members. The current DNP curriculum offered by two of the ICMSN member institutions, ULL and SELU, function independently of one another and have achieved national accreditation as separate entities.

3. Students

Describe evidence of student interest. Project the source of students (e.g., from existing programs, or prospects of students being recruited specifically for this program who might not otherwise be attracted to the institution).

Evidence of student interest:
The Graduate Degree in Nursing Program will offer both the MSN and DNP programs and advise all prospective students regarding the advantages and disadvantages of choosing one degree over another. An online Q&A resource will be available to prospective students online that will highlight the advantages of pursuing the terminal degree that includes emphasis by the National Academy of Sciences and other relevant professional nursing associations such as the American Association of Colleges of Nursing (AACN) and the National Organization for Nurse Practitioner Faculty (NONPF). As designed the proposed curriculum will only admit master's prepared advanced practice registered nurses.

The source of students will be advanced practice nurses with prescriptive privileges in the state of Louisiana and Texas. According to the *LSBN 2017 Annual Report*, a total of 83% (N=4,122) of all advanced practice registered nurses (APRNs) were master's prepared and represent potential applicants. This group would not otherwise be attracted to McNeese unless this program is offered. No currently enrolled Master's students would be admitted to the DNP Program as they are not APRNs.

An inherent advantage in the proposed Post Master's Certificate-PMHNP DNP is that the time to completion will require only two more semesters to earn the DNP. There is an emerging trend to pay doctorate-prepared nurse practitioners in health care based on their perceived value as highly credentialled health care professionals that will continue.

An online survey was conducted with prior graduates to determine interest in a PMHNP program and 85% of respondents indicated an interest in a PMHNP in the region. The continued expectation set forth by the Institute of Medicine/ National Academy of Medicine, National Organization Nurse Practitioner Faculty, and the AACN Position Statement on the Practice Doctorate of Nursing will continue to encourage future

students to pursue their doctorate. The following table demonstrates anticipated interest based on enrollment in the FPMHNP program (discontinued as of Fall 2016), the PMHNP program (initiated Fall 2016), and the Post Master's Certificate-PMHNP for the past four years.

Table 2
Enrollment Fall 2014 - Spring 2018

		Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016	Spring 2017	Fall 2017	Spring 2018
	FPMHNP*	19	22	19	22	0	0	0	0
Enrollment	PMHNP*	0	0	0	0	21	24	22	26
	PMC-PMHNP	6	7	12	16	14	21	12	17
	TOTAL	154	162	160	165	163	168	161	158

* The Family Psychiatric Mental Health NP concentration was changed to Psychiatric Mental Health NP starting Fall 2016.

Project enrollment and productivity for the first 5 years, and explain/justify the projections.

Table 3 demonstrates projected enrollment and graduates over a five-year period.
The initiation of eight students in Year 1 is recognized as an appropriate size for oversight of doctoral students and anticipates some withdrawal prior to enrollment in required clinical courses. Year 2 will admit an additional 6 students as the maximum recommended ratio by the National Organization of Nurse Practitioner Faculty. This will result in a total of 14 students who will begin clinical courses in the summer. Year 3 will continue clinical courses for Cohort 1 and the addition of 6 more students. Year 4 and 5 will

Table 3
Projected Psychiatric Mental Health Nurse Practitioner DNP Enrollment/Graduates
Year 1 – Year 5

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Enrollment	8	14	20	20	20	82
Graduates	0	0	6-8	6-8	6-8	18-24

model the admission and withdrawal numbers of Year 1-3.

List and describe resources that are available to support student success.

- The University provides excellent technology resources with fast and reliable Internet connectivity and distance education courses through *Moodle*, an open-source online learning management system. The system also offers *BIGBLUEBUTTON* that enables real-time discussions between faculty and students. Online and phone technical support for these courses is available to both students and faculty.
- A Writing Center offers individual writing instruction through online tutoring for students.
- Advising Services are readily available through on-site program coordinators and faculty.
- Frazar Memorial Library provides and supports student and faculty access and use privileges to adequate library collections as well as to other learning/information resources consistent with the degrees offered. Other campus learning/information resources are also provided to students, faculty, and the community by the University. The Library provides University and community constituents access to both traditional and electronic resources and is staffed by 10 faculty librarians and 7 paraprofessionals. Graduate assistants and student workers are employed in both public and technical service areas.
- There is a well-defined student-faculty mentoring process to identify and advise at-risk students. All students in the Graduate Nursing Degree Program must maintain a 3.0 average at all times. Students

who fall below 3.0 will be suspended from further graduate studies. Students who earn a grade of F in any graduate courses will be suspended from further graduate studies. Suspended graduate students may be readmitted on probation only upon the recommendation of their academic department head and with the approval of the dean of the Graduate School.

What preparation will be necessary for students to enter the program?

Students entering this program must be master's-prepared APRNs with prescriptive privileges who have been prepared across the life span with pathophysiology, pharmacology, and physical assessment. A gap analysis for previously learned lifespan pathophysiology, health assessment and pharmacology will first be conducted to determine adequacy. Deficiencies in these areas would have to be completed prior to enrollment.

If a Graduate program, indicate & discuss sources of financial support for students in the program.

Graduate students are eligible for unsubsidized loans and college-specific scholarships. In addition, the MSU Graduate Nursing Program was selected as an academic partner for an HRSA Advanced Nursing Education Workforce (ANEW) Program Grant, (Funding Opportunity Number: HRSA-17-067) with the Jefferson Community Health Care Centers (JCHCC) and the Louisiana State Primary Care Office (PCO) to develop and deliver longitudinal clinical training experiences to primary care Advanced Practice Registered Nursing (APRN) students. If awarded July 1, 2019, the MSU Graduate Nursing Degree Program will receive approximately $700,000 for a period of two years to provide tuition and stipends to prospective students. A portion of the selected students will be those pursuing the PMHNP DNP.

4. Faculty
List present faculty members who will be most directly involved in the proposed program: name, present rank; relevant degree; courses taught; other assignments.

Appendix 1 represents faculty members who will be most directly involved in the proposed program by name, date of appointment; present rank; degrees (by field) and the institutions granting them; present credits; contact hours; and student credit hours produced; and other assignments.

Project the number of new faculty members needed to initiate the program for each of the first five years. If it will be absorbed in whole or part by current faculty, explain how this will be done. Explain any special needs.

The proposed program includes the addition of one full-time doctorally prepared and certified licensed PMHNP in Year 1 (12-month appointment) who will be the program coordinator with both program management and a six-credit teaching load in the new program each semester of Year 1. Year 2 will add a second full-time doctorally prepared and certified licensed PMHNP based on enrollment expansion and the introduction of clinical courses. Year 3 will add a third full-time doctorally prepared DNP (9-month appointment) who has expertise in some of the *DNP Essentials* such as health care systems management/leadership, health information technology and epidemiology), and who can assume a major role in teaching *DNP Essentials* courses offered. Three additional PMHNP-DNP clinical adjuncts equal to 1 FTE will be assigned to clinical courses in Year 3. If enrollment remains stable, the faculty numbers will remain steady with no adjustments to be made. The Graduate Nursing Program is fortunate to have well credentialed PMHNP DNP faculty who can be accessed as clinical adjuncts when needed. No additional faculty are required if the projected enrollment remain steady. If enrollment increases, additional faculty would be required.

Describe involvement of faculty – present and projected – in research, extension, and other activities and the relationship of these activities to teaching load. For proposed new faculty, describe qualifications and/or strengths needed.

All graduate faculty are required to assume a 15-hour workload; 3 hours of which are allowed for research activities. The graduate faculty have a strong history of scholarly activity including clinical presentations,

peer reviews of publications, clinical consultations, and participation in the development of content-specific textbook chapters. Building on the previous success of the program, the new education program has the resources to be successful. The program director, Dr. S. Dilks has over two decades of experience educating PMHNP's, and a team of four full-time doctoral prepared faculty; 2 DNPs, 1 PhD FNP, and 1 PhD, as well as two doctoral prepared PMHNPs, one DNSc and one DNP, adjunct faculty to teach in the program. Dr. Dilks has developed community partnerships across the state, and has PMHNP alumni in all psychiatric settings who are willing to provide clinical experiences. Dr. Dilks' national network is equally beneficial to the program in her new role as president of the American Psychiatric Nurses Association.

Two of the prospective faculty for the program must be both doctorate prepared and nationally certified in Psychiatric Mental Health Advanced Practice Nursing; a third must be a doctorally prepared DNP. In addition, these faculty must have a minimum of one year of clinical experience in the behavioral health population as well as academic experience in a university-based setting.

5. Library and Other Special Resources
To initiate the program and maintain the program in the first five years what library holdings or resources will be necessary? How do journal, database, monograph, datasets, and other audiovisual materials compare to peer institutions' holdings with similar/related programs?

a. Adequacy of Present Library Holdings
The Library ensures access to a wide range of information sources in a variety of formats, including print, nonprint (e.g. microforms and audiovisual materials), and electronic to McNeese students, faculty, staff, and "Friends of the Library."
ExDatabases specific to Nursing and Health Sciences include:
- AHFS Consumer Medication Information
- Abstracts in Social Gerontology
- Alt HealthWatch
- CINAHL Complete
- Cochrane Library
- Cochrane Summaries
- DSM Library (American Psychiatric Association)
- Family Studies Abstracts
- Health Source: Nursing/Academic Edition
- MedicLatina
- MEDLINE
- Mental Measurements Yearbook
- Nursing & Allied Health Database
- PsychINFO
- Psychology and Behavioral Sciences Collection
- PubMed Central

General databases (contain Nursing and Health Sciences articles but not specific to those subjects):
- Academic Search Complete
- Academic Video Online: Premier
- Biological Abstracts
- Credo Reference
- Dissertations and Theses A&I
- Environment Complete
- ERIC
- Gale Virtual Reference Library
- JSTOR
- Open Textbook Library

- SocINDEX with Full Text

b. Need for Expansion

The Acquisitions Department selects, purchases, evaluates, and maintains materials according to criteria outlined under the "Acquisitions Policies" section of the Library's policy manual. Acquisitions' policies are reviewed annually and updated as needed. The Acquisitions Department works with faculty to maintain collection levels to support both undergraduate and graduate coursework. The RLG Conspectus system of collection levels (http://www.loc.gov/acq/devpol/cpc.html), though no longer actively maintained, is consulted as a set of general guidelines. The Acquisitions Department, working with library liaisons, consults with faculty about collection quality when departmental accreditation visits are eminent, when programs changes occur, and at other times as needed. Holdings in subject areas are periodically checked against *Resources for College Libraries* (http://www.rclweb.net/; login required from off-campus). The library records spending for instructional materials by discipline but does not specifically allocate funds by academic departments. Faculty members are encouraged to submit requests for materials; these requests are honored to the extent possible, allowing for available funding and collection development guidelines.

To ensure that relevant and appropriate materials are available for students and faculty in all areas of study, the Library has a Library Liaison Program that is overseen by an Acquisitions Librarian. In their role as departmental liaisons, librarians serve as the primary communication channel between academic departments and the Library on matters of mutual interest. The liaison promotes library resources pertinent to the CONHP and maintains an online nursing research guide, which provides access to nursing-related materials, research tools, and Websites. The Library currently subscribes to approximately 32 current print subscriptions to nursing and other health-related journals. The Library also subscribes to the following databases: ALT HealthWatch (EBSCO), VSCCINAHL ProQuest Nursing & Allied Health Source, Plus with Full Text Health, Health Source, Cochrane Collection, MedicLatina, and MEDLINE.

c. Other Institutional Library Resources Available to Faculty and Students

The Library is a member of LOUIS: The Louisiana Library Network, a statewide consortium that facilitates collaboration and cooperation among Louisiana's academic libraries. LOUIS, a project of the Louisiana Academic Library Information Network (LALINC), currently has 47 members and is funded by the members of LALINC and the Louisiana Board of Regents. LOUIS provides its members with a SirsiDynix shared integrated library system, electronic scholarly resources, the ILLiad interlibrary system, a LALINC card that allows for reciprocal borrowing privileges, a range of in-person and online training, and professional networking through regional and statewide meetings and conferences. An additional resource is LYRASIS, a multistate library network.

d-g. Current and Projected Additional Expenditures and Quality

Current expenditures dedicated to the CONHP Professions for the fiscal yeare2016-2017 were a total of $65,077.82 representing 16.86% of the total Library budget. Expenditures for the fiscal year 2017-2018 were a total of $68, 279. 78 representing 14.8% of the total Library budget.

What additional resources will be needed?

No additional resources will be needed at this time. Additional expenditures will be necessary to create and maintain the new doctoral program moving forward. As a member of the Intercollegiate Consortium for a Master of Science in Nursing (ICMSN) McNeese State University has maintained joint national accreditation with three other well-respected institutions; Nicholls State University, Southeastern Louisiana State University, and the University of Louisiana at Lafayette since its inception in the 1990's. All institutions have been repeatedly evaluated for the quality of its libraries and determined to be well prepared.

Are there any open educational resources (OER), including open textbooks, available to use as required course materials for this program? If so, which courses could these materials support, and what is the anticipated savings to students?

The University of Louisiana Board of Supervisors has initiated a project for all academic programs to pursue available OER resources for students. Dr. Debbie Johnson-Houston, Director of the MSU Library, has begun a search for potential resources and these will be communicated to the Graduate Nursing Degree Program for this proposed program.

6. Facilities and Equipment
Describe *existing* facilities (classrooms, labs, offices, etc.) available for the program and their present utilization.

The College of Nursing and Health Professions is located in Hardtner Hall, a technology-infused building with classrooms and conference rooms available to graduate students during the day and evening. In addition, clinical skill simulation laboratories as well as a community clinic are also accessible to assist in optimum learning for advanced practice registered nurses.

McNeese State University has a well-established technical infrastructure to support the proposed program with a solid history of online programs including the Intercollegiate Consortium for the Master of Science in Nursing Program, the online RN to BS in Nursing Program, and the online Bachelor of Science in Health Systems Management. Technical support is fully accessible to students and faculty through the Help Desk on campus as well as online. The University uses the open-source *Moodle* online Learning Management System (LMS) to offer online courses. Big-Blue-Button is located on *Moodle* and enables faculty to host synchronous presentations as well as asynchronous discussion boards.
No additional buildings, space, or remodeling is necessary to support the proposed building.

Describe the need for new facilities (e.g., special buildings, labs, remodeling, construction, equipment), and estimate the cost, proposed sources of funding, and estimated availability for program delivery.

There is no need for new facilities.

7. Administration
In what administrative entity (department/school/college) will the proposed program be housed? How will the new program affect the present administrative structure of the institution?

The proposed program will be assigned to the College of Nursing and Health Professions Graduate Nursing Program. The current Co-Coordinator of the Graduate Nursing Program and Program Coordinator of Advanced Practice Concentrations will have initial responsibility for oversight of the DNP Program until a newly hired faculty can assume coordination of the PMC PMHNP DNP proposed program. The new coordinator will report directly to the Dean of the College of Nursing and Health Professions. The DNP Program will be administratively under the direction of the Graduate Nursing Degree Program Coordinator. The Dean reports directly to the Provost and Vice President for Academic Affairs. Unique strengths of the Graduate Nursing Degree Program include a long history (over 25 years) of preparing advanced practice registered nurses who are practicing in unique and innovative programs all over the country. The Program has maintained a highly qualified and stable faculty of both full-time and part-time clinical adjuncts that enables the highest standards of teaching-learning practices.

Describe departmental strengths and/or weaknesses and how the proposed program will affect them.

Degree programs offered by the Graduate Nursing Program have achieved national certification since their inception. Enrollment and graduation numbers are some of the highest in the ICMSN, particularly in the Psychiatric Mental Health concentration for both Master's and Post-Master's programs. Dr. S. Dilks is a nationally recognized expert in the psychiatric mental health field and can guide the new program on solid ground.

8. Accreditation

Describe plan for achieving *program* accreditation, including: name of accrediting agency, basic requirements for accreditation, how the criteria will be achieved, and projected accreditation date.

a. Southern Association of Colleges and Schools-Commission on Colleges (SACS-COC)

Providing a Doctorate in Nursing Practice will require that McNeese State University seek SACs-COC *Approval of a Substantive Change and* must follow all required procedures. The substantive change sought by McNeese State University is to achieve SACSCOC accreditation at a higher degree level, from *Level IV-Offers the Master's and specialist degree at the highest degrees to Level V- Offers three or fewer doctorate degrees as the highest degree.* This process requires completing two applications, the "Application Summary Form Prepared for Commission Review" and the "Application for a Member Institution Seeking Accreditation at a Higher or Lower Degree Level". Both Dr. Peggy L Wolfe, Dean College of Nursing and Health Professions and Ms. Jessica Hutchings, Assistant Vice-President will complete the applications for Academic Affairs and Director of Institutional Research.

The following timeline will be followed for the request for a substantive change:

September 1, 2019:	Submit materials to SACS-COC for consideration at the SACSCOC Board of Trustees
December 2019:	Request for a substantive change reviewed and action taken by the SACSCOC Board of Trustees
January 2020 – June 2020:	Substantive Change Committee Visit to McNeese State University campus by selected SACS-COC representatives

Table 4 presents an estimate of the projected costs for a Substantive Change Visit by SACS-COC.

Table 4
Projected Cost for Substantive Change Committee Visit

Description	Projected Cost
Prospectus Application Fee	$ 500.00
Administrative Fee	$ 2000.00
Committee Costs – 7 members	
Travel – Airfare for 7 members	$ 5600.00
Lodging – 3 days for 7 members	$ 2100.00
Meals – 3 days for 7 members	$ 1071.00
Incidental Fee	$ 1050.00
Related Expenses	$ 750.00
TOTAL	**$13,071.00**

b. Louisiana State Board of Nursing (LSBN)

Although not considered accreditation, the proposed program would require approval by the Louisiana State Board of Nursing following approval by the University of Louisiana System and the Louisiana Board of Regents. A *Major Curriculum Change* application must be submitted to LSBN 60 days prior to review and action by the Nursing Education and Practice Committee. The application will be submitted to LSBN June-July, 2020 to coordinate LSBN approval and SACS-COC approval as closely as possible. This timeline may need to be readjusted as the approval process moves forward.

c.   Commission on Colleges of Nursing Education

Both the BSN and MSN Programs are fully accredited by the Commission on Collegiate Nursing (CCNE). A Letter of Intent to offer a new program will be submitted to CCNE following approval of the program proposal by the Louisiana State Board of Regents. The proposed DNP Program will apply to the CCNE for initial accreditation following the first five years of program delivery, however, preparation will begin immediately to ensure the program is implemented using the CCNE requirements for accreditation as noted in the CCNE *Procedures for Accreditation of Baccalaureate and Graduate Nursing Programs* as amended October 19, 2017. Evidence will require an on-going Program Evaluation Plan and compliance with four standards: Program Quality: Mission and Governance, Program Quality: Institutional Commitment and Resources, Program Quality: Curriculum and Teaching-Learning Practices, and Program Effectiveness: Assessment and Achievement of Program Outcomes. The anticipated costs for accreditation of the proposed program would include an application fee, new program fee, and an on-site evaluation fee. The anticipated cost will be approximately $15,000.

If a graduate program, describe the use of consultants in developing the proposal, and include a copy of the consultant's report as an appendix.

The curriculum presented in Table 1 (Part-Time) is a result of consultation with Dr. Dawn Vanderhoef, PhD, DNP, PMHNP-BC, PMHCNS-BC, Director of PMHNP Nurse Specialty at Vanderbilt University. The program curriculum is a total of 54 credits; 20 credits of psychiatric mental health advanced nursing practice nursing competencies (current master's/post-master's offered in the current ICMSN Psychiatric Mental Health concentration and 34 credits of DNP Essentials (new MSU DNP Essentials courses). Unlike most DNP Programs that offer a series of generic doctoral courses aligned with the DNP Essentials, MSU's DNP courses will offer both alignment with the DNP Essentials and direct psychiatric mental health application. A copy of Dr. Vanderhoef's consultation is included as Appendix 3.

9. Related Fields
Indicate subject matter fields at the institution which are related to, or will support, the proposed program; describe the relationship.

A reorganization of the College of Education is planned for the near future and will result in the transfer of the Department of Psychology from the College of Education to the College of Nursing and Health Professions. The Department of Psychology includes the McNeese Autism Program, Gambling Treatment Program and Kay Dore' Counseling Clinic. The College envisions unique opportunities for partnering with these programs for inter-professional research initiatives for both student and faculty with the proposed DNP program.

10. Cost & Revenue
Summarize additional costs to offer the program, e.g., additional funds for research needed to support the program; additional faculty, administrative support, and/or travel; student support. How will the program affect the allocation of departmental funds?

The College of Nursing and Health Professions has always received adequate support and resources from the University. Table 5 depicts the actual operating expenditures for the last two completed fiscal years, 2016-2017 and 2017-2018 for the Graduate Nursing Degree Program. Costs for clinical adjuncts may decrease in the current program as these adjuncts are reassigned to students' in the PMHNP DNP proposed program.
No additional internal funds for research will be needed to support the proposed program as DNP faculty will have access to sixteen Endowed Professorships in the College of Nursing and Health Professions.

Table 5
Graduate Nursing Degree Operating Expenditures
Fiscal Year 2016-2017 and 2017-2018

Description	2016 – 2017	2017 – 2018
Salaries	$ 961, 933.00	$ 945,324.00
Travel*	10,000.00	10,000.00
Equipment	-	-
Supplies	380.00	206.00
Operating	844.00	843.00
Library	65, 077.82	68,279.78
TOTAL	$1,038,234.82	$1,024,652.78

*Travel Support Provided through CONHP Endowed Professorships

Table 6 on the following page demonstrates an estimate of the costs of the proposed DNP Program for the first four years. The addition of the DNP will require additional support of a .5 FTE in Year 1. Years 2, 3, and 4 will increase to a total of 3. 2 FTE's as clinical experiences begin. Clinical adjuncts will be added for Year 3 and Year 4. Some full-time and part-time graduate faculty now teaching in the MSN Program will be available to teach across programs should the program be approved. Anticipated growth in the following years will require the additional faculty.

Table 6
SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR PROPOSED PROGRAM

Institution: ___**McNeese State University**_____   Date: __04/4/19_____

Degree Program, Unit: ___**Psychiatric Mental Health NP/DNP**_____
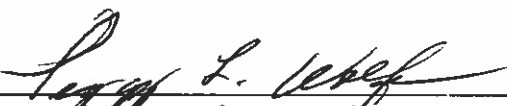
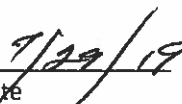FTE = Full Time Equivalent for Doctorate prepared faculty is 15 credits per semester.

EXPENDITURES								
INDICATE ACADEMIC YEAR:	**2020-2021**		**2021-2022**		**2022-2023**		**2023-2024**	
	AMOUNT	**FTE**	**Amount**	**FTE**	**AMOUNT**	**FTE**	**AMOUNT**	**FTE**
Faculty	$100,000	1	$200,000	2	$280,000	3	$280,000	3
Clinical Adjuncts					$24,000	1	$24,000	1
Support Personnel								
Fellowships and Scholarships								
SUB-TOTAL	$100,000	1	$200,000	2	$304,000	4	$304,000	4

	AMOUNT	**AMOUNT**	**AMOUNT**	**AMOUNT**
Facilities				
Equipment	$3,000	$3.000	$3,000	0
Travel	2,000	4,000	6,000	6,000
Supplies	1,000	1,250	1,500	1,750
Other - Endowed Professorships	5,000	10,000	15,000	15,000
SUB-TOTAL	$11,000	$18,250	$25,500	22, 750
TOTAL EXPENSES	$111,000	$218,250	$329,500	$326,750

REVENUES				
Revenue Anticipated From:	**AMOUNT**	**AMOUNT**	**AMOUNT**	**AMOUNT**
*State Appropriations	$	$	$	$
*Federal Grants/Contracts				
*State Grants/Contracts				
*Private Grants/Contracts				
Expected Enrollment	8	14	20	20
Tuition*	$72,000	$147,000	$196,000	$196,000
Fees	-			
*Other (specify)				
TOTAL REVENUES	$72,000	$147,000	$196,000	$196,000

Outside of revenue from tuition & fees, explain and justify any additional anticipated sources of funds, e.g., grants (in hand, promised, or in competition), institutional funds, etc.

In addition, the MSU Graduate Nursing Program was selected as an academic partner for an HRSA Advanced Nursing Education Workforce (ANEW) Program Grant, (Funding Opportunity Number: HRSA-17-067) with the Jefferson Community Health Care Centers (JCHCC) and the Louisiana State Primary Care Office (PCO) to develop and deliver longitudinal clinical training experiences to primary care Advanced Practice Registered Nursing (APRN) students. If awarded July 1, 2019, the MSU Graduate Nursing Degree Program will receive approximately $700,000 for a period of two years to provide tuition and stipends to prospective students. A portion of the selected students will be those pursuing the PMHNP DNP.

CERTIFICATIONS:

_____   _____
Primary Administrator for Proposed Program   Date

_____   _____
Provost/Chief Academic Officer   Date

_____   _____
Management Board/System Office   Date

References for MSU Program Proposal

American Association of Colleges of Nursing. T*he Essentials of Doctoral Education for Advanced Nursing Practice* October 2006. Retrieved from:
https://www.aacnnusing.org/Portals/42/Publications/DNPEsssentials.pdf

American Association of Colleges of Nursing. Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing 2018-2019

American Press. September 25, 2018. Editorial: State's Mentally Ill Finally Getting Break.

AACN Position Statement on the Practice Doctorate in Nursing, October 2004. Retrieved from:
https://www.aacnnursing.org/DNP/Position-Statement

Center for Disease Control and Prevention, Morbidity and Mortality Weekly Report (MMWR) March 2018. Overdose Deaths Involving Opioids, Concaine, and Psychostimulants- United States, 2015-2016 Retrieved from:
https://www.cdc.gov/mmwr/volumes/67/wr/mm6712a1.htm?s_cid=mm6712a1_w

Center for Disease Control and Prevention. Vital Signs and Suicide (2018). Retrieved from:
https://www.cdc.gov/vitalsigns/suicide/index.html

Institute of Medicine Report: The Future of Nursing: Leading Change, Advancing Health 2010.
Retrieved from:
https://www.nursingworld.org/practice-policy/iom-future-of-nursing-report/

Institute for Healthcare Improvement (2018). Laderman, Mara et.al. Integrating Behavioral Health in the Emergency Department and Upstream.

Louisiana Department of Health and Hospitals, Office of Public Health. Annual Health Report Card, March, 2018.

Louisiana Department of Public Safety and Corrections 2017. Incarceration rates in Louisiana.
Retrieved from:
http://thepsychologytimes.com/2017/07/26/behavioral-health-key-to-louisiana-problems-in-corrections-says-director-2

Louisiana State Board of Nursing, Louisiana Center for Nursing (2018). Louisiana's Multi-Regional Statewide Nursing Workforce Forecasting 2014 Update.

Louisiana State Board of Nursing. Louisiana Center for Nursing (2018). Findings from the Louisiana Center for Nursing 2018 Nurse Faculty Survey.

National Academy of Medicine. To Err is Human: Building A Safer Health System November 1999 and Crossing the Quality Chasm: A New Health System, March 2001.
Retrieved from:
http://nationalacademies.org/hmd/activities/quality/qualityhealthcareamerica.aspx

National Alliance of Mental Illness 2018. Incarcerated Mentally Ill.
Retrieved from:
https://www.nami.org/Learn-More/Public-Policy/Jailing-People-with-Mental-Illness

National Institute of Health. Advancing the Nation's Health Needs: NIH Research Training Programs 2005
Retrieved from:
https://www.ncbi.nlm.nih.gov/pubmed/20669451

National Organization of Nurse Practitioner Faculty. NONPF Core Competencies. (2017). Retrieved from:
https://www.rwjf.org/en/search-results.html?u=&k=Initiative+on+the+Future+of+Nursing

National Academy of Medicine, Perspectives. Knickman, Jack, et.al. (September, 2016). Improving Access to Effective Care for People Who Have Mental Health and Substance Use Disorders: A Vital Direction for Health and Health Care.

Robert Wood Johnson Foundation. The Initiative on the Future of Nursing (September 2009).
Retrieved from:
https://www.rwjf.org/en/search-results.html?u=&k=Initiative+on+the+Future+of+Nursing

United States Public Health Service 2018. Surgeon General Priorities and Opiod Epidemic.
Retrieved from:
https://surgeongeneral.gov/priorities/opiod-overdose-prevention /nalaxone-advisory.html

United States Department of Labor Bureau. March 2014. Statistics Employment Projections for 2012 – 2022.

United State Department of Veterans Affairs. News Release, September 2018. VA Releases National Suicide Data Report for 2005 – 2016.
https://www.va.gov/opa/pressrel/pressrelease.cfm?id=5114

United States Department of Health and Human Services, HRSA Health Workforce, 2016
https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/chartbookpart4.pdf

Appendix 1
McNeese State University
Graduate Nursing Degree Program
Doctorate Faculty
Fall 2018-Spring 2019

Name & Rank	Date of Appt.	Degree Certification	Practice or Research Expertise	Present Credits Taught	Present Contact Hours (clinical)	Student Credit Hours Produced
				# students	# students	
Jennifer Berken Assistant Professor	8/2014	Louisiana State University HSC NO- PhD Biostatistics McNeese State University- MS in Chemistry	Co-Researcher investigating relationship between nursing student success and employment during school	3 CR NURS605 – 16	0 CR	48
John Gary Chaney Visiting Lecturer	8/2014	University of Tennessee-PMHNP/DNP Southeastern Louisiana University-MSN	Practice Setting: Private Practice and Primary Care to psychiatric patients in hospitals and intensive out-patient setting Professional Interests: evaluation for mental health needs in Primary Care Providers at Federally Qualified Health Centers (FQHC)	3 CR NURS690 – 15	0 CR	45
Patricia Christy Assistant Professor	6/2011	Texas Christian University-DNP McNeese State University-MSN (FNP)	Practice Setting: Occupational Health Primary Care Practitioner for 16 years Item Writer for national certification board. Professional Interests: obesity, bullying and health care policy	8.5 CR NURS607 – 11 NURS682 – 12 NURS684 – 19	8 CR NURS682 – 5 NURS684 – 5	160.5
Sattaria Dilks Professor	8/2003	University of Tennessee HSC-PMHNP/DNP McNeese State University-MSN (FNP) McNeese State	Practice Setting: Outpatient PMHNP Director of ICMSN PMHNP Concentration Co-Coordinator of MSU Graduate Nursing Program Licensed Professional Counselor	10 CR	2 CR	63

		University- MA Counseling Psychology	Past President for LANP Currently President Elect for American Psychiatric Nurses Association (APNA) Current AANP Louisiana State Representative Professional Interests: Dissociative Identity Disorder, trauma informed care, mental illness stigma	NURS608 – 7 NURS690 – 5 NURS695 – 8	NURS690 – 10 NURS690 – 5	
Amanda Eymard Visiting Lecturer	1/2018	Louisiana State University HSC-DNSc Loyola University-MSN University of South Alabama-PMHNP	Practice Setting: PMHNP in Private Practice	2.5 CR	4 CR	49
			John Hartford Institute of Geriatric Nursing Research Scholar Professional Interests: Geriatric psychiatry	NURS690 – 10	NURS692 – 6	
Troy Fletcher Visiting Lecturer	1/2013	Regis University-DNP McNeese State University- MSN (FNP)	Practice Setting: Orthopedics – office and surgical	3 CR	4 CR	69
			Professional Interest: Orthopedics	NURS618 – 15	NURS683 – 6	
Deanna Harless Assistant Professor	5/2017	Southeastern Louisiana University-DNP University of Texas HSC Houston-MSN (ACNP)	Practice Setting: Inpatient Adult Care at Avail Hospital	12 CR	0 CR	108
			Completed and published revisions of chapter in *Clinical Guidelines in Primary Care*, Dermatology, 2018 Professional Interests: Neurology, Health Care Business	NURS605 – 15 NURS609 – 6 NURS618 – 10 NURS695 – 5		
Shannon Troy Hidalgo Visiting Lecturer	1/2012	Southeastern Louisiana University-DNP McNeese State University-MSN (FNP)	Practice Setting: School Based Health Primary Care Team Leader: Rural Health	2.5 CR	5 CR	71.5
			Doctorate Nursing Distinguished Scholarly Award: 2017 Professional Interests: pediatrics, women's health, men's health, immunizations, public health and school based health	NURS607 – 14	NURS607 – 11 NURS607 – 14 NURS682 – 6	
Samantha Lilley	8/2013	University of Louisiana at	Practice Setting: Rural Health Primary Care	3 CR	4 CR	60

Visiting Lecturer		Lafayette- DNP University of Alabama Birmingham- MSN (FNP)	Private Owner of Southern Family Healthcare Professional Interests: Health Care Advocacy, Health Care Business	NURS682 – 12	NURS682 – 6	
Yvonne Krielow Visiting Lecturer	1/2012	Texas Christian University- DNP McNeese State University- MSN (FNP)	Practice Setting: Rural Health Primary Care Private Owner of Rural Health Clinic for 8 years (since 2008) LA Health Care Review Team Stroke Study, MI Study –participating member from JALH Professional Interests: Health Care Business, Primary Care	3 CR NURS681 – 19	4 CR NURS684 – 7	85
Cynthia Roberts Visiting Lecturer	10/2012	University of Alabama: Birmingham- DNP McNeese State University- MSN (FNP)	Practice Setting: Federal Prison Manager of Department of Justice, Federal Bureau of Prisons Primary Care Clinic for incarcerated population Professional Interests: Forensic primary care	0 CR	4 CR NURS683 – 6	24
Twila Sterling-Guillory Associate Professor	8/2004	Southern University A&M- McNeese State University- MSN (FNP)	Practice Setting: Home Health Professional Interests: obesity in African American adolescents	12 CR NURS602 – 12 NURS609 – 14 NURS683 – 17 NURS695 – 6	4 CR NURS683 – 5	167
Virginia A. Warner Professor	10/1992	Texas Woman's University- PhD University of Maryland- MSN (CNS)	Professional Interests: nursing education, student success, online education, inter-professional education and caregivers of patients with COPD On Going Research interest is investigation of relationship between nursing student success and employment during school Co-Coordinator of the MSU Graduate Nursing Program	10.5 CR NURS600 – 9 NURS600 – 8 NURS602 – 14 NURS634 – 4 NURS695 – 3	0 CR	84

Present Credits Taught	**73 CR**		
Total # of Student Course Registrations	**286**		
Present Contact Hours (clinical)		**39 CR**	
Total # of Student Clinical Course Registrations		**92**	
Total Student Credit Hours Produced			**1,034**

Appendix 2

MINUTES
BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM
October 25, 2018

A.   **Call to Order**

The Board of Supervisors for the University of Louisiana System met on Thursday, October 25, 2018 at 1 1 a.m. in Room 100, Louisiana Purchase Room, of the Claiborne Conference Center, 1201 North Third Street, Baton Rouge, Louisiana.

B.   **Roll Call**

PRESENT

Mr. James Carter*	Mr. Alejandro Perkins
Mr. Edward Crawford III	Ms. Elizabeth Pierre
Mr. Richard Davis Jr.	Mr. Virgil Robinson
Ms. Lola Dunahoe	Mr. Mark Romero
Dr. Pamela Egan	Mr. Joe Salter
Mr. Thomas Kitchen	Mr. Robert Shreve
Mr. Jimmie "Beau" Martin, Jr.	Mr. Winfred Sibille
Mr. Shawn Murphy	

ABSENT

Dr. John Condos

arrived later in the meeting

Also present for the meeting were the following: System President Jim Henderson, System staff, administrators and faculty representatives from System campuses, Attorneys Linda Clark and Winton DeCuir, Jr., interested citizens, and representatives of the news media.

C.   **Invocation**

Mr. Romero provided the invocation.

D.   **Approval of Minutes of August 23.2018 Board Meeting**

Upon motion of Mr. Davis, seconded by Ms. Dunahoe, the minutes of the meeting of August 23, 2018 were approved.

E.   **Recognition of Ms. Holli Conway, Miss Louisiana 2018**

Dr. Henderson introduced Miss Louisiana 2018 Holli Conway, who is also second runner-up of Miss America 2019. Ms. Conway received a Bachelor of Science in Theatre with a concentration in Musical Theatre from Northwestern State University. She stated that, during her reign, she is being provided housing by the University of Louisiana at Monroe. Ms. Conway spoke highly of her experience as a Northwestern student and of her time with the Miss Louisiana organization.

F.   **Report of the Academic and Student Affairs Committee**

Upon motion of Dr. Egan, seconded by Mr. Murphy, the Board unanimously voted to approve the following items:

F.1.   Grambling State University's request for approval of a Proposal to offer a Bachelor of Science degree in Cybersecurity.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves Grambling State University's request for approval of a Proposal to offer a Bachelor of Science degree in Cybersecurity.

F.2.   McNeese State University's request for approval of a Letter of Intent to develop a New Academic Program leading to a Doctor of Nursing Practice.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves McNeese State University's request for approval of a Letter of Intent to develop a New Academic Program leading to a Doctor of Nursing Practice.

F.3.   Nicholls State University's request for approval to terminate the Bachelor of Science in General Family and Consumer Sciences.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves Nicholls State University's request for approval to terminate the Bachelor of Science in General Family and Consumer Sciences.

F.4.   Nicholls State University's request for approval to award an Honorary Doctorate of Commerce to Mr. Donald T. "Bollinger" at the Fall Commencement Exercises.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves Nicholls State University's request for approval to award an Honorary Doctorate of Commerce to Mr. Donald T. "Bollinger " at the Fall Commencement Exercises.

F.5.   Northwestern State University's request for approval of a Proposal to offer a Bachelor of Science in Resource Management.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves Northwestern State University's request for approval of a Proposal to offer a Bachelor of Science in Resource Management.

F.6.   University of Louisiana at Lafayette's request for approval of a Proposal to offer a Graduate Certificate in Cardiovascular Nursing Family Nurse Practitioner.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves University of Louisiana at Lafayette's request for approval of a Proposal to offer a Graduate Certificate in Cardiovascular Nursing Family Nurse Practitioner.

Marty J. Chabert
  Chair

Collis B. Temple III
  Vice Chair

Blake R. David
  Secretary

Kim Hunter Reed, Ph.D.
Gerald J. Theunissen
  Commissioner of
  Higher Education

Claudia H. Adley
Randy L. Ewing
Robert W. Levy
Charles R. McDonald
Darren G. Mire
Sonia A. Pérez
Wilbert D. Pryor
T. Jay Seale III
Gary N. Solomon, Jr.

Felix R. Weill
Jacqueline V. Wyatt
Anthony B. Kenney, Jr., Student

BOARD OF REGENTS

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Baton Rouge, LA 70821-3677
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AGENDA

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

February 27, 2019 • 9:15 a.m.

Pennington Biomedical Research Conference Center, Baton Rouge, LA

I. Call to Order
II. Roll Call
III. Consent Agenda
  A. Continued Authorization of Existing Centers and Institutes
    1. Center for Advanced Manufacturing and Technology — Delgado
  B. Routine Staff Reports
    1. Staff Approvals
    2. Progress Reports for Conditionally Approved Programs/Units
    3. Letters of Intent/Proposals in the Queue
IV. Academic Programs
  A. Letters of Intent
    1. MS / Sport Management - LSI-J
    2. Doctor of Nursing Practice (DNP) -- McNeese
  B. Program Proposals
    1. AAS / Computing and Information Systems — BRCC
    2. MS / Child & Family Studies - LSI-J
V. Proposed Undergraduate Certificate (Change to AA Policy 2.15)
VI.   Academic Centers and Institutes
  A.   Center for Collaborative Knowledge — I-SU
  B.   Proposed CRE, Cardiovascular Diseases and Sciences — LSUHSC-S
VII. Other Business
VIII. Adjournment

Committee Members: Collis Temple III, Chair; Blake David, Vice Chair; Claudia Adley; Anthony Kenney, Wilbert P or; Ga Solomon, Jr.; Jacqueline Wyatt; LCTCS, LSIJ, SU, UL System Representatives.

The Board of Regents is an Equal Opportunity and ADA Employer

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survey of APRN alumni had 18 students indicating an interest in a PMHNP DNP program within the first four days of the posting.

3. Budqet

The College of Nursing at McNeese has a long tradition of preparing PMHNPs at the Mater's level. Building on the success of the program, the college stated that it has the resources it would need for the intended DNP to be successful. The program director has over two decades of experience educating PMHNPs and a faculty team of doctoral prepared adjunct faculty to teach the DNP. The director has developed community partnerships across the state and has PMHNP alumni in psychiatric settings who are willing to provide clinical experiences. In addition, McNeese's online learning management system would facilitate offering the program fully online so that it could be available to students outside of the Lake Charles area. The intended program would require one additional full-time 12-month DNP faculty for Year 1, and a 9-month PMHNP/DNP to be added in the second year. Additional part-time adjuncts will be added as enrollment grows.

STAFF ANALYSIS

McNeese's expansion into doctoral level focus on the PMHNP and existing APRNs being able to add certification as a PMHNP will provide nurses with more in-depth knowledge and skills to address individual and community health needs, quality of care, patient safety, and the elimination of health disparities which, in turn, will positively influence the health status of Louisiana citizens. Staff support the University's request to develop a DNP proposal, but the proposal should address several points.

- Describe coordination efforts with other members of the Intercollegiate Consortium for a Master of Science in Nursing (ICMSN) in developing a distinctive DNP, considering suggestions, and making arrangements to share resources and offer/articulate courses. State whether the DNP would be in Psychiatric Mental Health Nursing (51.3810) or general Nursing Practice (51.3818).
- Make clear the various curriculum paths (MSN-DNP, BSN-DNP, and post-DNP), courses for the student's level of experience/training, and indicating a timeline for implementation of new courses & the program paths. Where feasible, indicate how each DNP essential is addressed and/or sufficiently supported.
- Differentiate the proposed program from the post-MSN and post-DNP pathways currently offered at SLU and ULL, or address why a third offering is needed.
- Address the time and resources needed to offer a doctoral program, including smaller class sizes for the clinicals and the DNP projects. Indicate whether the MSN, PMC, and DNP will all be continued. Given the size of the current MSN and PMC, adding a DNP with only 1 .67 more faculty seems improbable.
- Address the need for SACSCOC approval of a substantive change in adding a DNP: demonstrate understanding of the process and implications, with a plan, timeline, and budget for achieving SACSCOC approval for implementation. Also address coordination with I-SBN.

McNeese has a strong graduate nursing education program and could provide access to quality DNP education to residents of southwest Louisiana and southeast Texas, in particular, through this program. As it moves into online delivery, its reach could be even farther as nursing professionals seek to expand their skills and outreach.

STAFF RECOMMENDATION

The Senior Staff recommend that the Academic and Student Affairs Committee accept the Letter of Intent and grant approval for McNeese State University to develop a proposal for a Doctor of Nursing Practice (DNP). The proposal should address issues presented in the staff summary.

October 2, 2018
Peggy L. Wolfe, PhD, MS, MPH, RN
Dean, College of Nursing and Health Professions
McNeese University College of Nursing
Box: 90415
Hardtner 102-D

Dear Dr. Wolfe,

Thank you for the opportunity to meet with you and your faculty. It is an exciting time in nursing, and I was honored to learn about your proposed educational offering. Below please find my summary which highlights both the national, and state level need for mental health providers, along with the recommendation for preparing Psychiatric Mental Health Nurse Practitioner's with a Doctor of Nursing Practice degree.

Summary
A dearth of behavioral health providers exist on a national level, and the numbers in the state of LA are bleaker. To address the shortage of behavioral health providers in LA, McNeese State University College of Nursing (CON) proposes the development of a Post-Master's Certificate (PMC) Psychiatric Mental Health Nurse Practitioner (PMHNP) Doctor of Nursing Practice (DNP) program. The development of the first doctoral degree offered at McNeese, to be from the CON, is consistent with the University's Mission. The McNeese Office of the newly appointed President, has a strategic plan to increase doctoral offerings, in line the mission of innovation and academic excellence. The mission is in alinement with the national nursing movement that Advanced Practice Registered Nurses (APRN's), such as PMHNP's, are prepared for entry level into advanced practice nursing at the doctoral level. At the national level, the National Organization of Nurse Practitioner Faculties (NONPF), published a position statement May 2018, that by 2025, all NP programs move to entry-level of education for NP practice to the DNP degree. A PMC PMHNP DNP is consistent with the University's vision, and the nursing profession's recommendation.
In the United States (U.S.) one and five citizens live with any mental illness, 21.5 million people age 12 or older have a substance use disorder, and heroin use in people age 12 or older is on the rise (SAMHSA, 2014). Over 4.3 million Americans use pain killers for non-medical reasons, but only 20% of people with an opioid use disorder receive treatment. In 2016 there were over 42,249 deaths from opioid overdoses (SAMHSA, 2018). Suicide is now the 10th leading cause of death (CDC, 2018), and the risk of suicide is three times as likely, or 200% higher the first week after discharge from a psychiatric facility (Siegfried & Bartlett, 2014). The national statistics are sobering; however, rates of suicide and opioid use are on the rise in LA. The state suicide rate spiked almost 30% from 1999-2016, ranking LA 27th for self-harm deaths (CDC, 2018). The opioid crisis is a concern in LA, ranking 32nd in overall drug related deaths, with a 47.5% increase in total opioid deaths between 2014-2016 (LA Health Report Card, Department of Health and Hospitals, 2017). The number of opioid prescriptions in LA is 103.2 per 100 persons, compared to 70 opioid prescriptions per 100 persons in the U.S. (NIH, 2018).
A 2007 seminal report by the Annapolis Coalition identified the behavioral health workforce crisis, identifying too few workers, and need for additional training. In the U.S. there are 4,000 mental health professional shortage areas (HPSAs), and 55% of all rural U.S. counties have no practicing mental health worker (HRSA, 2016). The workforce needs for youth are staggering, estimating about 63% of youth with severe major depression go untreated (SAMSAH, 2014). LA has a severe shortage of mental health providers, with only 4,959 APRN's, of which only 4% are PMHNP's (LA Board of Nursing Annual Report, 2017) just under the national average of 5.6% of PMHNP's (Delaney, Drew, & Rushton, 2018). All but five LA parishes are HPSA shortage areas. PMHNP have the education, licensure and certification to fill the mental

health provider shortage, and can treat patients across the lifespan, in all settings (Delaney, Drew, & Rushton).

The proposed PMC PMHNP DNP offering by McNeese CON has the potential to address the state behavioral health workforce shortage, and provide targeted education and clinical experiences to treat youth, and those with substance use disorders. A long range goal is to increase access to quality mental health care, and decrease suicide rates. The benefits of the McNeese PMH PMHNP DNP program is multifaceted. First, the program will educate PMHNP's at the highest level, which is consistent with the NONPF's statement that the DNP is the entry into advance practice nursing. This program places McNeese and LA PMHNP's at the forefront of APRN education. A strategic decision to offer the PMC PMHNP DNP on a part-time basis, is intentionally targeting those who would enroll in this program. Most students who apply to this program are working, and have multiple family, work, and community obligations necessitates a part time program. A part time program plan is setting the student up for success. Second, the program will be offered online, allowing increased access by all APRN's in the state. Additionally, the tuition cost is affordable, making McNeese an attractive option to obtain a clinical doctoral degree in nursing. The proposed curriculum integrates DNP level essentials with the PMHNP competencies, and has an increased number of direct clinical hours. The increase in clinical hours, in the proposed program of study, allows for additional targeted clinical experiences working with youth and persons who have substance use disorders, preparing the highest level of PMHNP with the knowledge, skills, and abilities to leave McNeese as a practice ready clinician, armed to address LA's mental health needs. For example, these students will have additional training in trauma, suicide prevention, and treatment of substance use disorder. McNeese graduates will have completed the training required to apply for a medication assisted treatment (MAT) waiver, preparing the PMHNP to treat opioid use disorders with evidence based treatments.

McNeese University CON has a long, rich tradition in preparing PMHNP's at the Master's level. Following the health care and educational trends, offering a PMC PMHNP DNP is necessary for clinicians to care for complex patients, in highly inefficient, complex health care systems. Building on the previous success of the program, the new education program has the resources to be success. The program director, Dr. S. Dilks has over two decades of experience educating PMHNP's, and a faculty team of over four doctoral prepared adjunct faculty to teach in the program. Dr. Dilks has developed community partnerships across the state, and has PMHNP alumni in all psychiatric settings who are willing to provide clinical experiences. McNeese has an online learning management system to offer this innovative fully online program. The McNeese CON, PMC PMHNP DNP program is innovative, and not currently offered by any other academic institution in the state. Additionally, given the thoughtful planning, resource, faculty excellence, and university support, this potential has the potential to quickly become a regional PMC PMHNP DNP Program of excellence targeted to meet the needs of LA residents.

Sincerely,

Dawn Vanderhoef, PhD, DNP, PMHNP-BC, FAANP
Assistant Professor of Nursing and Psychiatry
Vanderbilt School of Nursing
1107 18th Ave South
Nashville, TN 37240

References

American Association of Colleges of Nursing. The Essentials of Doctoral Education for Advanced Nursing Practice October 2006. Retrieved from: https://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf

An Action Plan on Behavioral Health Workforce Development. (2007). retrieved from: http://annapoliscoalition.org/wp-content/uploads/2013/11/action-plan-full-report.pdf

Delaney, K., Drew, B., & Rushton, A. (2018). Report on the APNA national psychiatric mental health advanced practice registered nurse survey. *JAPNA, 1-10.*

National Institute on Drug Abuse. February, 2018. Opioid Related Overdose Deaths Louisiana Opioid Summary. Retrieved from: https://www.drugabuse.gov/drugs-abuse/opioids/opioid-summaries-by-state/louisiana-opioid-summary

SAMHSA (2014). Behavioral Health Trends in the United States: Results from the 2014 National Survey on Drug Use and Health. Retrieved from: https://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf

SAMSHA (2018). SAMHSA/HHS: An Update on the Opioid Crisis. Elinore McCance-Katz, MD, PhD, Assistant Secretary for Mental Health and Substance Use. Retrieved from: https://www.samhsa.gov/sites/default/files/aatod_2018_final.pdf

Siegfried N & Bartlett M. Navigating suicide assessment: A roadmap for providers. A presentation at The Joint Commission's 2014 Annual Behavioral Health Care Conference, Oct. 15-16, 2014.
National Organization of Nurse Practitioner Faculties Resources

The Doctor of Nursing Practice Degree: Entry into Nurse Practitioner Practice by 2025. Retrieved from:https://cdn.ymaws.com/www.nonpf.org/resource/resmgr/dnp/v3_05.2018_NONPF_DNP_Stateme.pdf

NONPF Exemplar Templates – offered on the NONPF Faculty Portal
NONPF Core Competencies. (2017). Retrieved from: https://cdn.ymaws.com/www.nonpf.org/resource/resmgr/competencies/2017_NPCoreComps_with_Curric.pdf

NONPF Population Competencies. (2013). Retrieved from: https://cdn.ymaws.com/www.nonpf.org/resource/resmgr/Competencies/CompilationPopFocusComps2013.pdf

Titling of the Doctor of Nursing Practice Project 2013. Retrieved from: https://cdn.ymaws.com/www.nonpf.org/resource/resmgr/dnp/dnpprojectstitlingpaperjune2.pdf

Clinical Education Issues in Preparing Nurse Practitioner Students for Independent Practice: An Ongoing Series of Papers. (2010). Retrieved from: https://cdn.ymaws.com/www.nonpf.org/resource/resmgr/dnp/clinicaleducationissuespprfinalapril2010.pdf

Other Resources

Beck, A., Manderscheid, R., & Buerhaus, P. (2018). The Future of the Behavioral Health Workforce: Optimism and Opportunity. *Am J of Pre Medicine, 54(6S3)*: S187-189.

Criteria for Evaluation of Nurse Practitioner Programs 5th Ed. (2016). A Report of the National Task Force on Quality Nurse Practitioner Education. Retrieved from: https://cdn.ymaws.com/www.nonpf.org/resource/resmgr/Docs/EvalCriteria2016Final.pdf

The Hamilton Project. June 2018. Improving Efficiency in the Health Care System: Removing Anticompetitive Barriers for Advanced Practice Registered Nurses and Physician Assistants. Retrieved from: http://www.hamiltonproject.org/assets/files/AdamsandMarkowitz_20180611.pdf

National Council for Behavioral Health. March 28, 2017. Medical Director Institute. The Psychiatric Shortage Causes and Solutions. Retrieved from: https://www.thenationalcouncil.org/wp-content/uploads/2017/03/Psychiatric-Shortage_National-Council-.pdf

BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 22, 2019

Item E.4.   **Nicholls State University's** request for approval to enter into a Memorandum of
Understanding with Grambling State University.

EXECUTIVE SUMMARY

Nicholls State University requests approval to enter into a Memorandum of Understanding
(MOU) with Grambling State University. The purpose of the proposed MOU is to establish and
maintain an ongoing pathway for Grambling business school graduates to pursue a Master of
Business Administration (MBA) at Nicholls. The document (created in collaboration) outlines
communication strategies, admission requirements, and establishes two graduate assistantship
positions available to eligible Grambling business school graduates.

RECOMMENDATION

It is recommended that the following resolution be adopted:

*NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the
University of Louisiana System hereby approves Nicholls State University's request for approval
to enter into a Memorandum of Understanding with Grambling State University.*

Office of the President

P.O. Box 2001 | Thibodaux, LA 70310 | 985.448.4003 | 985.448.4920 [F]

NICHOLLS
STATE UNIVERSITY

July 29, 2019

Dr. Jim Henderson
System President
University of Louisiana System
1201 North Third Street, Suite 7-300
Baton Rouge, LA 70802

Dear Dr. Henderson:

Nicholls State University requests consideration and approval of the following to be placed on the agenda for the August 22, 2019 meeting of the Board of Supervisors for the University of Louisiana System:

Approval of Memorandum of Understanding with Grambling State University

Thank you for your assistance in this matter.

Sincerely,

John Clune
President

JC/jms

Enclosures

pc: Mr. Alex Arceneaux, Executive Vice President
        Dr. Sue Westbrook, Provost and Vice President for Academic and Student Affairs
        Dr. Todd Keller, Vice Provost
        Dr. Michele Caruso, Associate Vice President for Student Affairs
        Mr. Terry Braud, Vice President for Finance and Administration
        Mrs. Paulette Mayon, Internal Auditor
        Dr. James Stewart, Faculty Senate President/ Faculty Association Representative
        Mrs. Renee Hicks, Executive Director of Planning and Institutional Effectiveness

Memorandum of Understanding
between
Grambling State University
and
Nicholls State University

This Memorandum of Understanding (MOU) is written and established by and between Grambling State University, hereinafter referred to as "Grambling," and Nicholls State University hereinafter referred to as "Nicholls." Grambling and Nicholls are hereinafter collectively referred to as "the universities."

Memorandum of Understanding

Whereas the purpose of this MOU is to serve as a general agreement toward establishing stable cooperation between the universities to prepare students to meet workforce development needs as well-educated, responsible, and engaged business professionals;

Whereas Grambling and Nicholls are both institutional members of the University of Louisiana System and are governed by its Board of Supervisors;

Whereas Grambling and Nicholls assume leadership in training students both regional and worldwide for careers in business;

Whereas Grambling and Nicholls both offer well-established degree programs accredited by AACSB – The Association to Advance Collegiate Schools of Business. Grambling at the undergraduate level and Nicholls at both the undergraduate and graduate level;

Whereas Grambling and Nicholls currently hold and have continuously held regional accreditation by SACSCOC;

Whereas it is in the best interest of the universities to ensure that students have the best opportunity to maximize ongoing educational opportunities, and whereby this MOU provides Grambling business school graduates with a seamless pathway to pursuing a Master of Business Administration at Nicholls;

Whereas it is in Nicholls' best interest to attract, expand, and diversify its Master of Business Administration student body representation;

Responsibilities

Grambling and Nicholls hereby commit to working collaboratively in developing and maintaining an ongoing pathway for Grambling business school graduates to pursue a Master of Business Administration at Nicholls.

Implementation

Faculty representatives from Grambling and Nicholls will meet to formalize the methodology for communicating and advancing Nicholls MBA program opportunities for Grambling business school graduates. Part of this methodology might include student information sessions provided by Nicholls faculty representatives and ongoing guidance by Grambling faculty members.

The MBA Director at Nicholls will make himself/herself available, on a priority basis, to answer any questions or concerns posed by interested students from Grambling.

Interested Grambling business school graduates would apply directly to Nicholls for admission into the MBA program and must meet all regular admission requirements as outlined in the university catalog.

Because of Grambling's AACSB accreditation, any Grambling business school graduate that achieves an undergraduate grade point average of 3.3 or above becomes eligible for a GMAT/GRE waiver.

Because of this special relationship, Nicholls will agree to reserve two graduate assistantship positions for Grambling business school graduates who meet the before mentioned GMAT/GRE waiver. These students must be admitted into the MBA program and submit his/her application for the graduate assistantships no later than 30-days before the start of his/her first semester. If no one from Grambling meets that deadline, the graduate assistantship positions may be awarded to other eligible students.

Review of Agreement

In witness of which, we the undersigned, as respective representatives and chief administrators of the universities note that:

1. this MOU describes the inaugural collaboration between the universities toward training students for the business workforce and as such may be updated and expanded to represent changes and growth both at the universities and the employment market;

2. the signing of this MOU is neither formal nor binding, yet it implies that the universities will strive to accomplish collaborative activities described herein promptly;

3. either university may nullify and void this MOU according to their changing needs.

4. no provision in this MOU shall supersede or intend to replace, violate, or negate rules and regulations set forth by the governing bodies of the universities, including the University of Louisiana System and the Louisiana Board of Regents;

5. the effective date of this MOU is _____;

6. both Grambling and Nicholls have caused this MOU to be duly executed as of the date set forth below.

_____   _____
Dr. Donald S. White, Dean   Dr. Marilyn Macik-Frey
Grambling State University   Nicholls State University
College of Business Administration   College of Business Administration

_____   _____
Dr. Connie Walton, Interim Provost   Dr. Velma "Sue" Westbrook, Provost
Grambling State University   Nicholls State University

_____   _____
Mr. Rick Gallot, President   Dr. Jay Clune, President
Grambling State University   Nicholls State University

_____   _____
Date   Date

**BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM**

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 22, 2019

Item E.5. **Southeastern Louisiana University's** request for approval to terminate the Post-Baccalaureate Certificate in Accounting.

EXECUTIVE SUMMARY

Southeastern Louisiana University (SLU) requests approval to terminate the Post-Baccalaureate Certificate (PBC) in Accounting. Approved by the Louisiana Board of Regents in May 2015 the PBC in Accounting has not enrolled any students. Due to the lack of demand, SLU would like to terminate the certificate program; such action will have no impact on other academic programs or units.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves Southeastern Louisiana University's request for approval to terminate the Post-Baccalaureate Certificate in Accounting.

SOUTHEASTERN
LOUISIANA UNIVERSITY | Office of the President

August 1, 2019

Dr. James B. Henderson
President, The University of Louisiana System
1201 North Third Street, Suite 7-300
Baton Rouge, LA 70802

Re: Termination of Post-Baccalaureate Certificate in Accounting

Dr. Henderson:

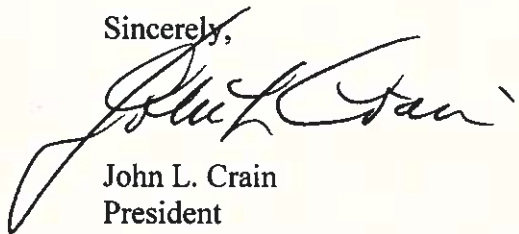Southeastern Louisiana University respectfully requests that its Post-Baccalaureate Certificate in Accounting be terminated. There has been no interest in this program since its creation.

Please place this item on the agenda for the August 2019 meeting of the University of Louisiana System Board of Supervisors.

Your consideration of this request is appreciated.

Sincerely,

John L. Crain
President

Request to Terminate an Academic Degree Program or Administrative/Research Unit

1. Institution Southeastern Louisiana University	

2. Type of Termination (check one)

__x__   A. Academic Program (If A, complete *all* remaining sections)

_____   B. Administrative Unit (If B, skip sections 3, 4, 5, and 6)

_____   C. Research Unit – Center or Institute (If C, skip sections 3, 4, 5, and 6)

3. Degree Designation. (BA, MS, PhD, etc.)   PBC

4. Title and CIP Code.   Post-Baccalaureate Certificate (PBC) in Accounting   52.0301

5. Semester/year at which no new enrollments will be accepted.   Fall, 2019

6. Teach-out plan, including semester/year at which reporting of degrees shall cease.

N/A (no students are enrolled and no new enrollments will be accepted);
reporting should cease as of Fall, 2019.

7. Reason for request. (Ex: low demand, job opportunities, changing focus, program duplication, loss of funding sources, etc.)

Explanation:

There has been no demand for this program because students are better served to use the courses/hours required to obtain a second degree in Accounting. There have been no students enrolled. There will be no impact of termination on other programs/units.

* Include statements which address the impact of the termination upon remaining programs/units (if applicable). For example, a request to terminate the Department of Chemistry should also include information about the academic programs in that Department – will they be maintained or terminated as well? If maintained, where will they reside? Will the department maintaining these programs be re-named? How will this further affect the administrative structure at the institution? Append documentation to this form.

8. If collaboration with other institutions is involved, identify partners. Each participating institution must submit a separate request form.
   N/A

9. Program/Unit Contact (name, title, email address, telephone number)
   Antoinette Phillips
   Dean, College of Business
   antoinette.phillips@southeastern.edu
   985.549.2258

Campus Head:		**Date:** 7/17/19
Management Board:		**Date:**

For Academic Program Termination: note the SACS/COC requirements (Substantive Change) for notification, teach-out plan/agreement, and request for SACS approval following BOR approval. Send BOR/AcAf a copy of the SACS/COC response to finalize the action.

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 22, 2019

Item E.6. **University of Louisiana at Lafayette's** request for approval to dissolve the Ed.D. Consortium with Southeastern Louisiana University.

EXECUTIVE SUMMARY

The Ed.D. Consortium was established in 2006 between the University of Louisiana at Lafayette and Southeastern Louisiana University to facilitate the creation of Ed.D. programs to enhance educational leadership in Louisiana and the nation. The Consortium allowed for the universities to combine resources and expertise in order to jumpstart the programs on each campus, provided support to deliver the curriculum, and expanded the faculty base for dissertation committees. This joint effort served the needs of both Ed.D. programs and provided support necessary to launch the programs.

Currently, UL Lafayette has 105 Ed.D. students taking courses and working on dissertations, and has graduated 96 students. Southeastern's Ed.D. program has 82 students taking courses and working on dissertations, and has graduated 53 students. Current enrollment and graduate numbers are clear indicators that both programs are active, successful, and capable of independently administering their respective Ed.D. programs. As a result, UL Lafayette and Southeastern would like to dissolve the Consortium at this time. An action of this nature will not have an adverse impact on current students or faculty.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves the University of Louisiana at Lafayette's request for approval to dissolve the Ed.D. Consortium with Southeastern Louisiana University.

August 1, 2019

E 6

Dr. James B. Henderson
President
University of Louisiana System
1201 North Third Street, Suite 7-300
Baton Rouge, LA 70802

Dear Dr. Henderson:

I am hereby requesting that the Ed.D. Consortium between the University of Louisiana at Lafayette and Southeastern Louisiana University be dissolved. Each University will continue to operate its programs independently. Attached are a request letter signed by UL Lafayette and Southeastern Louisiana University and an addendum.

Please place this item on the agenda for consideration at the August 2019 meeting of the Board of Supervisors.

Sincerely,

E. Joseph Savoie
President

svc

Attachment

July 31, 2019

Dr. Jeannine Kahn,
Provost & Vice President for Academic Affairs
University of Louisiana System
1201 North Third Street, Suite 7-300
Baton Rouge, LA 70802

Re: Ed.D. Consortium - University of Louisiana at Lafayette and Southeastern Louisiana University

Dear Dr. Kahn:

On behalf of the University of Louisiana at Lafayette and Southeastern Louisiana University Ed.D. Consortium, and as the Chair and Vice Chair of the Consortium, Dr. Tena Golding and I would like to request, as outlined below, that the Consortium be dissolved and that each university continue to operate its program independently.

The Ed.D. Consortium was established in 2006 between the University of Louisiana at Lafayette and Southeastern Louisiana University to facilitate the creation of an Ed.D. program to enhance educational leadership in Louisiana and the nation. The Consortium combined the resources and expertise of both universities to jumpstart programs on each campus, provide support to deliver the curriculum, and create dissertation committees. However, since its implementation, each program has grown and sufficient expertise is now available at each university to operate each Ed.D. Program independently.

Currently, the University of Louisiana at Lafayette has 105 Ed.D. students taking courses and working on dissertations, and has graduated 96 students. Southeastern Louisiana University has 82 Ed.D. students taking courses and working on dissertations, and has graduated 53 students. These enrollment and graduation numbers clearly indicate both programs are active, successful, and capable of operating independently.

The Consortium has served the needs of both Ed.D. programs and provided the support necessary to launch the start of the programs. However, both universities are now fully capable of independently administering their respective Ed.Ds. Therefore, we hereby request that the Ed.D. Consortium between University of Louisiana at Lafayette and Southeastern Louisiana University be dissolved at this time.

Respectfully submitted:

Dr. Jaimie Hebert, Consortium Chair   Dr. Tena L. Golding, Consortium, Vice-Chair
Provost & Vice President for Academic Affairs   Provost & Vice President for Academic Affairs
University of Louisiana at Lafayette   Southeastern Louisiana University

Addendum to Ed.D. Consortium
University of Louisiana at Lafayette and Southeastern Louisiana University request for dissolution

At the time of its creation, the Ed. D. Consortium combined the existing resources and expertise of both the University of Louisiana at Lafayette and Southeastern Louisiana University to jumpstart Ed. D. programs on each campus, provide support to offer courses, and create dissertation committees. However, since implementation, each program has grown and sufficient expertise is now available at each university to operate each Ed.D. Program independently.

The consortium agreement allowed for courses to be jointly offered by each university. These joint courses were originally offered via compressed video or face to face in the SELU Nursing building in Baton Rouge. Research courses were primarily taught on students' home campus. Students in both programs had access to the combined resources of both campuses, including the libraries. All dissertation committees included at least one faculty member from the partner university. The Consortium Council (composed of 2 Provosts, 2 College of Education Deans, 2 Department Heads, and 2 Ed. D. program coordinators) met periodically to discuss processes and protocols, and plan for future growth. A dedicated Moodle site was created to allow students from each university to enroll in the Moodle section of a course, regardless of which university was offering it. Over the years, the Ed. D. faculty from each university have met at retreats to discuss program issues, changes, concerns, and avenues for increased collaboration. These efforts resulted in numerous national presentations and scholarly publications, including a book on Education in Louisiana.

Currently, students from each university may enroll in courses offered by the other institution when the courses are not available on their home campus, or when a unique Special Topics course is offered by a particular campus. Some students do take advantage of this opportunity. The consortium provided an excellent incubator for the growth of both Ed. D. programs by expanding the range of faculty expertise, as dissertation committees included members from both institutions, based primarily on disciplinary knowledge. Senior faculty at both institutions have been instrumental in mentoring and supporting new faculty and students.

One initial unforeseen benefit of the Ed. D. Consortium was the ability to collaborate in order to offer the Ed. D. program to school districts and regions without access to nearby doctoral programs in their areas. By combining faculty and splitting courses, the consortium was able to assist the Terrebonne/Lafourche region and the Ascension Parish region; thus, enhancing educational leadership in Louisiana. Additionally, faculty from both campuses were provided with excellent opportunities to interact and work together within the Consortium. While the coordination of courses and dissertation committees was complicated, both universities originally benefited from the knowledge and skills associated with faculty from the other university. In the future, it is anticipated that some faculty will continue to serve on dissertations of the other institution and provide support, as warranted by their expertise in a given field.

The Consortium has served the needs of both Ed.D. programs and provided the support necessary to successfully launch the start of the programs. However, both universities are now fully capable of independently administering their respective Ed.D. programs. Therefore, we hereby request that the Ed.D. Consortium between University of Louisiana at Lafayette and Southeastern Louisiana University be dissolved at this time.

Item E.7. **University of New Orleans'** request for approval of a Graduate Certificate in Machine Learning and Artificial Intelligence.

EXECUTIVE SUMMARY

The University of New Orleans (UNO) is requesting approval of a Graduate Certificate (GC) in Machine Learning (ML) and Artificial Intelligence (AI). Current trends indicate that ML and AI are transforming industries such as manufacturing, healthcare, self-driving vehicles, finance, online retail, to name a few, profoundly. Discipline-wise, ML and AI cover a wide spectrum of applications such as search engines, stock-market predictions, game playing, medical diagnosis, and bioinformatics. Artificial Intelligence uses ML to form a computing machine or program an intelligent agent, which can perceive its environment and take actions that maximize its chances of successfully achieving its goals. Nowadays ML and AI help computers learn complex and hard-to-solve problems without requiring the writing of program-code explicitly. This paradigm shift has been necessitated by the emergence of big data and high-throughput data generation, for which the applications of ML and AI have been essential.

The proposed GC, composed of 12 credit hours, has been designed by UNO's Computer Science Department in an effort to produce graduate students rapidly, who will be qualified for high-demand jobs, especially in ML and AI areas. The creation of the proposed GC is in response to companies, industries, and institutions, such as DXC Technology, GE Digital-New Orleans, Intralox,, Entergy, Cleco, iSeatz, Lucid, SampleChain, Space and Naval Warfare Systems Command, Pine-Biotech, NASA and Naval Research Laboratory-Stennis Space Center, and the Louisiana Department of Wildlife and Fisheries, who have already contacted and collaborated with the Computer Science Department at UNO for advanced ML and AI application development. Core courses required of the proposed GC have been offered at UNO since 2014. By leveraging faculty expertise, existing courses, and infrastructure developed at UNO over the last decade, the University will be able to cost-effectively offer a GC that directly responds to one of the highest areas of demand and most acute shortage of professionals with advanced training both within Louisiana and beyond.

The proposed GC will target two streams of potential students – graduates of traditional undergraduate programs in Computer Science (CS) and professionals with non-CS degrees who are currently interested in enhancing their ML and AI skills or are seeking a career change. The University's Bachelor of Science in CS (with nearly 400 majors and soon-to-be available concentrations in ML and AI) will be the primary feeder, but the ultimate goal is to establish a GC with a regional reputation that will draw from a state-wide pool of applicants. With that in mind, UNO plans to provide the offering via 100% distance learning technologies once the GC is established.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves the University of New Orleans' request for approval of a Graduate Certificate in Machine Learning and Artificial Intelligence.

THE UNIVERSITY *of*
NEW ORLEANS

OFFICE OF THE PRESIDENT

June 28, 2019

Dr. Jim Henderson
President
The University of Louisiana System
1201 North Third Street
Baton Rouge, LA 70802

Dear Dr. Henderson,

The University of New Orleans requests approval for the attached Letter of Intent for a Graduate Certificate in Machine Learning and Artificial Intelligence.

Thank you for your consideration of this request. Please do not hesitate to contact me should you have any questions.

Sincerely,

John W. Nicklow
President

2000 Administration Annex I 2000 Lakeshore Drive I New Orleans, Louisiana 70148
phone 504.280.6201 I *fax* 504.280.6872
A Member of the University of Louisiana System Committed to Equal Opportunity

PROPOSAL to DEVELOP a NEW ACADEMIC CERTIFICATE PROGRAM
(CAS, PAC, UC, PBC, GC, PMC, PPC)

Date: May/25/2019

Campus: **Lakefront Campus, University of New Orleans (UNO).**	Program: <u>CIP, Certificate Designation, Title:</u> CIP: 11.0701 Designation/Title: **Graduate Certificate in Machine Learning and Artificial Intelligence**

Institutional Contact Person & Contact Info (if clarification is needed):
MAHDI ABDELGUERFI, Ph.D.
Professor & Chair
308 Mathematics Bldg., University of New Orleans,
2000 Lakeshore Drive, New Orleans, LA 70148.
504.280.6594 mahdi@cs.uno.edu

1. Certificate Description

Describe the program concept: purpose and objectives; proposed curriculum; mode of delivery (on-site/hybrid/on-line). Indicate which courses are new; describe plan for rolling out new courses.

** <u>Attach catalog descriptions for the required and elective courses, including prerequisites and LCCN, when applicable.</u> **

The University of New Orleans (UNO) proposes to launch a graduate certificate in *Machine Learning* (ML) and *Artificial Intelligence* (AI), which would help the Computer Science (CS) Department in its effort to produce graduate students rapidly, who will be qualified for high-demand jobs, especially in the ML and AI areas. Indeed, in the discipline of Computer Science, the top salary in North America is offered for ML and AI practitioners (US $143,750/year[1]).

Furthermore, the structure and content of the proposed program are being modeled after prominent graduate certificate programs in ML and AI, to wit: the graduate certificate in ML and AI at MIT[2], the graduate certification in AI program at Stanford[3], with adaptations to take further advantage of the strengths of UNO in these fields.

To obtain a graduate certificate in ML and AI, a student will have to complete **two** required courses and two electives from a pool of seven three-credit courses.

(To be taken)	Courses	Credit Hours
Required (2)	CSCI 6521 Advanced Machine Learning I	3
	CSCI 6522 Advanced Machine Learning II	3
Electives (2)	CSCI 6250 Big Data Analytics and Systems	3
	CSCI 6454 Parallel and Scientific Computing	3
	CSCI 6633 Computer Vision	3
	CSCI 6634 Data Visualization	3
	CSCI 6645 Planning Algorithms in Artificial Intelligence	3
	CSCI 6650 Intelligent Agents and Multi-Agent Systems	3
	CSCI 6990 Topics in Advanced Computer Science	3

REQUIRED COURSES:

A student must complete two core courses, CSCI 6521 and CSCI 6522. The courses' descriptions are as follows:

CSCI 6521 Advanced Machine Learning I -- A probabilistic perspective of machine learning - Regression, Probability, Bayesian Statistics, Kernels, Deep Learning and models such as Gaussian, Mixture, and Markov. Students will have opportunities to learn state-of-the-art machine learning algorithms, implementations, and their application to solve real-world problems. The focus of the class would be on the programming aspects of the statistical topics listed here.

CSCI 6522 Advanced Machine Learning II -- Topics include advanced machine learning models such as Neural Networks, Support Vector Machines, Boosting, Genetic Algorithms, Clustering, Decision Trees, Random Forests, and Deep Belief Nets. Students will have opportunities to learn state-of-the-art machine learning algorithms, implementations, and their application to solve real-world problems. The focus of the class would be on the programming aspects of the statistical topics listed here.

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[1] https://www.indeed.com/salaries/Artificial-Intelligence-Salaries
[2] https://professional.mit.edu/programs/short-programs/professional-certificate-program-machine-learning-AI
[3] https://scpd.stanford.edu/public/category/courseCategoryCertificateProfile.do?method=load&certificateId=1226717

A student must select two out of seven elective courses, which are CSCI 6250, CSCI 6454, CSCI 6633, CSCI 6634, CSCI 6645, CSCI 6650 and CSCI 6990. They are described below:

CSCI 6250 Big Data Analytics and Systems -- This course covers a combination of knowledge in data mining, database warehousing, and distributed systems for utilizing information assets of high volume, high velocity, high variety, and high veracity. The class discussions will cover the key problems, theoretical perspectives, methodologies, algorithms, technologies, and tools in these involved areas such as data exploration techniques, linked data perspectives, semantic data services, statistical analysis for big data, and the supporting tools in distributed systems including HADOOP, Map Reduce, Hive and HBase as well as Sal OLAP extensions.

CSCI 6454 Parallel and Scientific Computing -- An introduction to the fundamental concepts of real-world scientific computing using modern parallel computing architecture. Includes parallel architectures, parallel programming methods and techniques, parallel algorithm designs, and parallel performance analysis. Hands-on experience with MPI, OpenMP, MapReduce, CUDA (GPU), and related technologies with applications to diverse scientific domains. Students will learn to write parallel programs to solve practical problems in the discipline of their interests.

CSCI 6633 Computer Vision -- This course provides an overview of fundamental techniques for representing and recognizing visual patterns in two or three dimensions. Topics covered include segmentation and morphology, pattern recognition and classification, color- and text-based measures, motion analysis, and optical flow, three-dimensional models from stereo imaging, knowledge-based systems, and scene understanding.

CSCI 6634 Data Visualization -- An introduction to standard techniques for displaying, exploring, and understanding non-visual data from medical, scientific, engineering, financial, or other domains. Topics covered will include visualization models, data representation, color-mapping and contouring, volume rendering, data transformations, modeling, image processing techniques, animation and user interaction.

CSCI 6645 Planning Algorithms in Artificial Intelligence -- Planning formalism within classical Artificial Intelligence research that studies how to represent and discover sequences of actions that change the world from some initial state to the desired goal state. This class surveys planning research from the 1960s to the present. Topics covered include partial-order and least-commitment planners, plan graphs, planners based on satisfiability and constraint-satisfaction, and modern state-space planning heuristics.

CSCI 6650 Intelligent Agents and Multi-Agent Systems -- An investigation of computational systems in which several intelligent agents or agents and humans, interact. Includes architectures for building intelligent agents, design, and implementation of multi-agent systems, inter-agent communication languages, and protocols, problem-solving, planning, learning and adaptation techniques in multi-agent systems.

CSCI 6990 Topics in Advanced Computer Science -- This is an advanced graduate-level course whose topics may change from semester to semester. The prerequisites change as dictated by the topic. This course may be taken multiple times for credit. The topics are but not limited to Deep Learning, Reinforcement Learning, Evolutionary Learning, Robotics, Optimization, Probabilistic Graphical Models, Natural Language Processing, Machine Learning for Data Streams, Recommender Systems, Advanced Game Theory, Computational Neuroscience, Algorithmic aspect of Molecular Dynamics and so on. CSCI 6990 to assist the department in coping, in a timely manner, with the rapid changes happening in the high demanding ML and AI areas.

The courses included in the proposed curriculum are already entirely in existence.

2. Need

Outline how this program is deemed essential for the wellbeing of the state, region, or academy (e.g., how is it relevant, how does it contribute to economic development or relate to current/evolving needs). Identify similar programs in the state and explain why the proposed certificate is needed.

WORKFORCE NEEDS

Current trends indicate that ML and AI are transforming industries such as manufacturing, healthcare, self-driving vehicles, finance, online retail, to name a few, profoundly. Discipline-wise, ML and AI cover a wide spectrum of applications such as search engines, stock-market predictions, game playing, medical diagnosis, and bioinformatics. AI uses ML to form a computing machine or program an intelligent agent, which can perceive its environment and take actions that maximize its chances of successfully achieving its goals[4].

Nowadays, ML and AI help computers learn complex and hard-to-solve problems without requiring the writing of program-code explicitly. This paradigm shift has been necessitated by the emergence of big data and high-throughput data generation, for which the applications of ML and AI have become essential. This is because it is now necessary and unavoidable to automate the

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[4] https://web.archive.org/web/20151118212402/http://www-formal.stanford.edu/jmc/whatisai/whatisai.html

methods to be applied to uncover the patterns to predict future data and train machines. ML and AI techniques are used to address critical pattern recognition and classification problems from the given dataset in various applications. The objective of the ML and AI program is to teach those techniques and apply them properly. The target techniques are particularly useful in high-dimensional and complex data space, where deterministic approaches are infeasible or are difficult to apply.

REGIONAL EMPLOYER NEEDS

Recently-established DXC Technology is building a 2,000-job Digital Transformation Center across the street from the Louisiana Superdome in downtown New Orleans and plans to hire 300 IT and business enterprise professionals by the end of year one[5]. Most importantly, it plans to integrate a model of higher-education workforce solutions to prepare talent for its Digital Transformation Center, where next-generation technology services that support clients' digital transformations will be developed and delivered. DXC's annual payroll will exceed $133 million by 2025. DXC is hiring qualified candidates in Data Science where Machine Learning and Artificial Intelligence knowledge are required[6].

Companies, industries, and institutions, such as GE Digital–New Orleans, Intralox, Entergy, Cleco, iSeatz, Lucid, SampleChain, Space and Naval Warfare Systems Command (SPAWAR), Pine-Biotech, NASA and Naval Research Laboratory–Stennis Space Center, Louisiana Department of Wildlife and Fisheries, are already contacting and collaborating with the Computer Science Department at the University of New Orleans for advanced ML and AI application development.

RELEVANT GRADUATE PROGRAMS AT LOUISIANA INSTITUTIONS

The Computer Science departments of note in Louisiana find their homes at these institutions: Louisiana Tech University, University of Louisiana at Lafayette, Louisiana State University, University of Louisiana Monroe, University of New Orleans (UNO), Southeastern Louisiana University, McNeese State University, Grambling State University, and Southern University and A&M College.

Among these universities, only UNO currently employs a significant number of faculty members in its Department of Computer Science with instructional and research expertise in ML, AI & Big Data. Indeed, the UNO Computer Science Department is home to the Bioinformatics and Machine Learning Lab (BMLL), the Narrative Intelligence Lab (NIL), and the Canizaro/Livingston Gulf States Center for Environmental Informatics (GulfSCEI)[7].

The University of Louisiana at Lafayette (UL) houses the National Science Foundation Center for Visual and Decision Informatics (CVDI) and Center for Business & Information Technologies (CBIT), but these barely overlap Data Science, let alone Machine Learning and Artificial Intelligence.

The Department of Global Biostatistics and Data Science at Tulane hosts the Global Research Data Center (GRDC) and the Center for Bioinformatics and Genomics, with its Multiscale Bioimaging and Bioinformatics Laboratory (MBB). However, this is only one-third of the ML and AI related programs that UNO already covers.

The Louisiana State University (LSU) Stephenson Department of Entrepreneurship & Information Systems (SDEIS) is focused on producing entrepreneurs who are primarily grounded in business analytics & information systems.

There does not currently exist a Graduate Certificate degree that focuses on ML and AI offered by any of these universities. It is our contention that UNO is prominently positioned and only needs to integrate its different programs to offer a very timely and much-needed Graduate Certificate in ML and AI.

GLOBAL DEMANDS AND ADVANCING LOUISIANA

It has been estimated that <u>by 2030, the economic impact of ML and AI on North America and Worldwide, will be about $4 trillion and $16 trillion</u>, respectively[8,9]. It has already been mentioned that the average salary for ML and AI jobs is about US $144k/year in North America. However, the top salary is offered by Japan, which is just under US $1 million/year[10], an indication that there is a very high demand for the discipline worldwide.

There is a well-documented and pervasive shortage of ML and AI professionals at all levels of industry and government. One report suggests that there are 300,000 AI engineers worldwide, but millions more are needed[11]. A recent article in *Forbes Magazine* predicts that the growth of AI will create 58 million new jobs by 2022[12]. In Louisiana, the demand for experts in ML and AI is high. According to Glassdoor, a job posting website[13], New Orleans, Baton Rouge, Lafayette, Shreveport, Monroe, Lake Charles, Alexandria, Metairie, Hammond and Bossier City are the top cities in the state with a need for experts in ML and AI.

[5] http://gov.louisiana.gov/index.cfm/newsroom/detail/1129
[6] https://www.ziprecruiter.com/Jobs/Artificial-Intelligence/--in-Louisiana
[7] https://www.mastersindatascience.org/schools/louisiana/
[8] P. Stone, R. Brooks, E. Brynjolfsson, R. Calo, O. Etzioni, G. Hager, J. Hirschberg, S. Kalyanakrishnan, E. Kamar, S. Kraus, K. Leyton-Brown, D. Parkes, W. Press, A. Saxenian, J. Shah, M. Tambe, and A. Teller, *Artificial Intelligence and Life in 2030*, One Hundred Year Study on Artificial Intelligence: Report of the 2015-2016 Study Panel, Stanford University, Stanford, CA, 2016.
[9] T. Mills. "The Impact of Artificial Intelligence In The Everyday Lives Of Consumers," August, 2018;
https://www.forbes.com/sites/forbestechcouncil/2018/03/07/the-impact-of-artificial-intelligence-in-the-everyday-lives-of-consumers/
[10] https://medium.com/mlmemoirs/artificial-intelligence-salaries-heading-skyward-e41b2a7bba7d
[11] https://www.forbes.com/sites/bernardmarr/2018/06/25/the-ai-skills-crisis-and-how-to-close-the-gap/#46773e5631f3
[12] https://www.forbes.com/sites/amitchowdhry/2018/09/18/artificial-intelligence-to-create-58-million-new-jobs-by-2022-says-report/#79681d74d4ba
[13] https://www.glassdoor.com/Job/new-orleans-machine-learning-jobs-SRCH_IL.0,11_IC1150035_KO12,28.htm

Additionally, a review of the job listings in Glassdoor reveals that a large number of companies and federal agencies are currently seeking experts in ML and AI for positions in Louisiana including: DXC, IBM Baton Rouge, Radiance Technologies, Choices, Lucid, AWS, Sirius Computer Technologies, Danaher, Cynet Systems, Device Medical Products, Ochsner Health System, Acuity One LLC, Salient CRGT, U.S. Navy, Bennett Aerospace, Entergy and the U.S. Army Corps of Engineers - New Orleans District. Furthermore, iMerit is in the process of establishing an AI center in New Orleans with the goal of hiring 100 employees within 12 to 18 months[14]. Finally, two video game development companies, High Voltage and inXile have recently opened game studios in New Orleans with the goal of hiring 85 and 50 IT specialists[15] (many of whom are expected to have expertise in ML and AI) respectively.

By leveraging the expertise, curriculum, and infrastructure developed over the last decade, UNO will be able to cost-efficiently create a Graduate Certificate that directly responds to one of the highest areas of highest demand and most acute shortage of professionals with advanced training both within Louisiana and nationwide. Therefore, it makes eminent sense to establish a Graduate Certificate in ML and AI at this critical juncture.

3. Students

Describe student interest. Project enrollment and productivity for the first 5 years; justify projections.

UNO has been offering all the core courses in the proposed program regularly since 2014. There is an overwhelming interest on the part of students to take these offerings. For example, the graduate-level Advanced Machine Learning course that was offered in the Spring 2019 semester quickly filled all the initial seats. After fielding many requests, an additional 35% more students had to be accommodated due to legitimate interest and requirements.

Additionally, it is not just Computer Science students who enroll in these graduate-level courses. Indeed, students from many other disciplines, such as Electrical Engineering, Mathematics, Biology, Earth & Environmental Science/Coastal Sciences, and even College of Sciences non-degree matriculants, seek advice to learn and request enrollment in these courses.

The program will target two streams of potential candidates—alumni of traditional undergraduate programs in Computer Science (CS), and professionals with non-CS degrees who are currently interested in enhancing their ML and AI skills or are seeking a career change. UNO's B.S. program in Computer Science, with nearly 400 majors, and soon-to-be available concentration in ML and AI will be a primary feeder, but the ultimate goal is to establish a Graduate Certificate with a regional reputation that will draw from a state-wide pool of applicants.

Projected enrollment:

Year 1	Year 2	Year 3	Year 4
10	20	30	40

The estimate for the first year is based on feedback from existing students to gauge their interest in ML & AI as a career. The target enrollment for the program is a minimum of 40 students. We consider this to be a conservative estimate and expect to reach that level by Year 4 at the latest. The targeted enrollment growth will come from four main pools:

- Alumni of the UNO B.S. program in Computer Science who are interested in ML and AI; in AY 2018, there were 56 graduates in this program.
- Working professionals in partner companies and government agencies, specifically: SPAWAR New Orleans, which is located next to UNO; Naval Research Lab (NRL) & Naval Oceanographic Office (NAVO), both located at Stennis Space Center in Mississippi. Both entities are keenly interested in establishing an educational pipeline for their employees.
- General recruitment via advertising and marketing.
- Online/hybrid content delivery.

Once the program is officially established, we plan to prepare, over a period of no more than one year, for full online/hybrid delivery of all the courses. Our new generation classroom facilities feature high-quality audio/video streaming capabilities and multiple displays that will allow for effective remote presence and interaction. The Computer Science High End Computing facilities will make hands-on exercises fully accessible 24/7 to students from anywhere.

4. Accreditation

Describe plan for achieving program accreditation.

Currently, the entity that grants accreditation in the area of Computer Science, ABET, does not do this for certificate programs. From the ABET website we glean this statement: "[ABET accredits] postsecondary, degree-granting programs offered by regionally accredited institutions in the United States and nationally accredited institutions outside the United States. We do not accredit certification, training or doctoral programs."

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[14] https://www.nola.com/business/2018/04/100_jobs_planned_at_new_orlean.html
[15] http://fortune.com/2015/11/23/video-games-help-rebuild-new-orleans/

5. Faculty, Administration, & Other Resources

How will instructional needs be met: will additional faculty, facilities, equipment, or library resources be required? What department will deliver and oversee the proposed program?
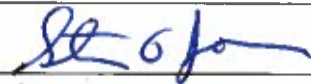
The entire course offerings proposed in the graduate certification program already exists in the Department of Computer Science with an adequate number of expert faculty members to offer and teach them. Therefore, the Department of Computer Science at UNO will deliver and oversee the proposed program.

6. Cost

Summarize additional costs to offer the program. On separate budget sheet, estimate costs and revenues for the projected program for the first five years, indicating need for additional appropriations (if any).

An initial cost of $100,000 – $125,000 is anticipated to purchase equipment such as server-machines to enhance the in-house cloud infrastructure, high-capacity storage to store heterogeneous datasets to conduct the additional courses and research exercises. Part of the needed computing equipment has already been ordered using an ongoing BoR Enhancement grant. The cost of the remaining equipment will be absorbed by the Computer Science Department as part of its infrastructure improvement program funded through its Differential Fee annual budget, summer instruction anticipated profits, and operating budget. We will also allocate $15,000 each of the first two years for digital marketing of the new program

CERTIFICATIONS:

_____
Primary Administrator for Proposed Certificate

Date 6/18/19

_____
Provost/Chief Academic Officer

Date 6/18/19

_____
Management Board/System Office

Date

SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR PROPOSED PROGRAM

Institution: University of New Orleans   **Date: 3/28/2019**

Degree Program, Unit: Graduate Certificate in Machine Learning & Artificial Intelligence

FTE = Full Time Equivalent (use the institution's standard definition and provide that definition).

EXPENDITURES								
INDICATE ACADEMIC YEAR:	FIRST		SECOND		THIRD		FOURTH	
	AMOUNT	FTE	Amount	FTE	AMOUNT	FTE	AMOUNT	FTE
Faculty	$0		$0		$0		$0	
Graduate Assistants								
Support Personnel								
Fellowships and Scholarships								
SUB-TOTAL								
	AMOUNT		AMOUNT		AMOUNT		AMOUNT	
Facilities	$		$		$		$	
Equipment								
Travel								
Marketing	$15,000		$15,000					
Other (specify)								
SUB-TOTAL	$		$		$		$	
TOTAL EXPENSES	$15,000		$15,000		$0		$0	
REVENUES								
Revenue Anticipated From:	AMOUNT		AMOUNT		AMOUNT		AMOUNT	
*State Appropriations	$		$		$		$	
*Federal Grants/Contracts								
*State Grants/Contracts								
*Private Grants/Contracts								
Expected Enrollment	10		20		30		40	
Tuition + Fees	$6,848x 10 = $68,480		$6,848x 20= $136,960		$6,848 x 30= $205,440		$6,848x 40= $273,920	
Fees								
*Other (specify)								
TOTAL REVENUES	$68,480		$136,960		$205,440		$273,920	

* Describe/explain expected sources of funds in proposal text.

BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 22, 2019

Item E.8.   **University of New Orleans'** request for approval of an Undergraduate Certificate in Unmanned Systems Management.

EXECUTIVE SUMMARY

The University of New Orleans is requesting approval of an Undergraduate Certificate (UC) in Unmanned Systems Management. The proposed 18 credit hour UC is designed to teach students about managing unmanned aerial, land and waterborne vehicles. Courses required of the UC include: Introduction to Unmanned Systems, Basic Project Management, Remote Pilot and Drone Applications, Ship Control Systems, Systems Engineering, and Autonomy of Ocean Vehicles. This is an interdisciplinary plan of study that incorporates existing courses from two departments within the College of Engineering.

There has been recent interest in the State of Louisiana in the development and production of unmanned systems. Companies such as Sharkteck Autonomous Vessels and Oceaneering would benefit from individuals who have knowledge and skillsets specific to the management of unmanned systems. In addition, aerial drones are being used by many surveying and mapping companies in the Gulf South region. These drones are being used to provide record topographical information, to provide details on Louisiana's coast line, and to assist farmers in inspecting fields and crops. A similar certificate program in Unmanned Aerial Systems Management is offered by the University of Louisiana at Monroe; however, that program focuses solely on aerial systems. What is proposed by UNO leverages the uniqueness of its School of Naval Architecture and Marine Engineering to include management of unmanned waterborne systems along with aerial and land systems.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves the University of New Orleans' request for approval of an Undergraduate Certificate in Unmanned Systems Management.

THE UNIVERSITY *of*
NEW ORLEANS

OFFICE OF THE PRESIDENT

July 23, 2019

Dr. Jim Henderson
President
The University of Louisiana System
1201 North Third Street
Baton Rouge, LA 70802

Dear Dr. Henderson,

The University of New Orleans requests approval for the attached Letter of Intent for an Undergraduate Certificate in Unmanned Systems Management. The proposed curriculum is designed to teach students about managing unmanned aerial, land and waterborne vehicles.

Thank you for your consideration of this request. Please do not hesitate to contact me should you have any questions.

Sincerely,

John W. Nicklow
President

2000 Administration Annex I 2000 Lakeshore Drive I New Orleans, Louisiana 70148
phone 504.280.6201 I fax 504.280.6872
A Member of the University of Louisiana System Committed to Equal Opportunity

PROPOSAL to DEVELOP a NEW ACADEMIC CERTIFICATE PROGRAM
(CAS, PAC, UC, PBC, GC, PMC, PPC)

Date:

Campus: The University of New Orleans	Program: <u>CIP, Certificate Designation, Title</u> 140999 Unmanned Systems Management

Institutional Contact Person & Contact Info (if clarification is needed)

Tina Chang, AVP of Professional and Continuing Education
The University of New Orleans
2000 Lakeshore Drive, New Orleans, LA 70148
504-280-1024 *tchang@uno.edu,*

Dr. Taskin Kocak, Dean, College of Engineering
tkocak@uno.edu

Dr. Brandon Taravella, Associate Professor, Naval Architecture and Marine Engineering
bmtarave@uno.edu

1. Certificate Description

Describe the program concept: purpose and objectives; proposed curriculum; mode of delivery (on-site/hybrid/on-line). Indicate which courses are new; describe plan for rolling out new courses.

** <u>Attach catalog descriptions for the required and elective courses, including prerequisites and LCCN, when applicable.</u> **

The University of New Orleans proposes to introduce an undergraduate certificate in Unmanned Systems Management. The proposed curriculum is based on five existing departmental courses and one new introductory course. The proposed curriculum has been designed to teach students about managing unmanned aerial, land and waterborne vehicles.

The certificate will require the addition of one new course to the curriculum. This course ENGR 2xxx will provide an introduction to unmanned systems including the types of unmanned systems and their uses. Three courses (ENCE 3390, ENCE 4313 and NAME 4138) are existing courses. Two courses (NAME 4080 and NAME 4139) will be closely related to existing 6000 level courses.

ENCE 3390 will provide the students with a basic understanding of project management including economic analysis. ENCE 4313 and NAME 4139 will include topics unique to the design and control of aerial or waterborne vehicles. NAME 4080 will include engineering concepts for system design, and NAME 4138 will provide the students with a basic background in control systems.

Requirement	Hours
ENGR 2xxx: Intro to Unmanned Systems	3
ENCE 3390: Basic Project Management	3
ENCE 4313: Remote Pilot and Drone Applications	3
NAME 4138: Ship Control Systems	3
NAME 4080: Systems Engineering	3
NAME 4139: Autonomy of Ocean Vehicles	3

Students with limited background in mathematics may be required to complete some additional prerequisites such as MATH 2114 (4 credits), MATH 2124 (4 credits), MATH 2221 (3 credits), MATH 3511 (3 credits).

2. Need

Outline how this program is deemed essential for the wellbeing of the state, region, or academy (e.g., how is it relevant, how does it contribute to economic development or relate to current/evolving needs). Identify similar programs in the state and explain why the proposed certificate is needed.

There has been recent interest in the State of Louisiana in the development and production of unmanned systems. A few examples include:

Sharktech Autonomous Vessels: Sharktech was developed by Louisiana based company Metal Shark Boats in Jeanerette, Louisiana. Metal Shark is a leading designer and builder of custom vessels for commercial, defense, and law enforcement applications worldwide. These boats implement autonomous vessel technology into existing Metal Shark hull platforms. These boats are currently being designed by engineers in Louisiana and provided to many government and commercial agencies. (https://www.metalsharkboats.com/autonomous-vessels/)

Oceaneering is the world's largest manufacturer and operator of work class remote operated vehicles (ROV). These ROVs primarily operate in subsea environments to assist in oil and gas installations, search and rescue, inspections, etc. Oceaneering has a significant portion of their fleet supporting the oil and gas industry in the Gulf of Mexico.

Aerial drones are being used by many surveying and mapping companies in the Gulf South region. These drones are being used to provide record topographical information, to provide details on Louisiana's coast line, and to assist farmers in inspecting fields and crops.

A similar certificate program in Unmanned Aerial Systems Management can be found at the University of Louisiana Monroe (ULM). The certificate program proposed by the University of New Orleans should not be perceived as a duplicate because it leverages the uniqueness of its School of Naval Architecture and Marine Engineering to include management of unmanned waterborne systems along with aerial and land systems. The certificate program at ULM focuses solely on aerial systems.

3. Students

Describe student interest. Project enrollment and productivity for the first 5 years; justify projections.

The proposed program is an interdisciplinary plan of study that incorporates courses from two departments within the College of Engineering. Five of the six proposed courses are existing within the University of New Orleans curriculum. These five courses regularly experience relatively large enrollments. Introduction of this certificate will facilitate our efforts to collaborate among the various engineering disciplines. Successful accomplishment of this goal could help us increase the enrollment of the College of Engineering by 10% in the first few years.

4. Accreditation

Describe plan for achieving program accreditation.

There is no accreditation required.

5. Faculty, Administration, & Other Resources

How will instructional needs be met: will additional faculty, facilities, equipment, or library resources be required? What department will deliver and oversee the proposed program?

There will be no new faculty, facilities, equipment, or library resources. The Department of Architecture and Marine Engineering.

6. Cost

Summarize additional costs to offer the program. On separate budget sheet, estimate costs and revenues for the projected program for the first four years, indicating need for additional appropriations (if any).

There will be no additional cost required.

CERTIFICATIONS:

Tina Chang _____7/24/2019
Primary Administrator for Proposed Certificate   Date

Mahyar Amazegar _____7/24/2019
Provost/Chief Academic Officer   Date

_____   _____
Management Board/System Office   Date

SUMMARY OF ESTIMATED <u>ADDITIONAL</u> COSTS/INCOME FOR PROPOSED CERTIFICATE

Institution: The University of New Orleans_____   Date: __July 24, 2019_____

Certificate Program, Unit: ___140999_Unmanned Systems Management_____

FTE = Full Time Equivalent (use the institution's standard definition and provide that definition).

EXPENDITURES								
	FIRST YEAR		**SECOND YEAR**		**THIRD YEAR**		**FOURTH YEAR**	
	AMOUNT	**FTE**	**Amount**	**FTE**	**AMOUNT**	**FTE**	**AMOUNT**	**FTE**
Faculty	$0		$0		$0		$0	
Graduate Assistants								
Support Personnel								
Fellowships and Scholarships								
SUB-TOTAL EXPENSES	$0		$0		$0		$0	
	AMOUNT		**AMOUNT**		**AMOUNT**		**AMOUNT**	
Facilities	$0		$0		$0		$0	
Equipment								
Travel								
Supplies								
SUB-TOTAL	$0		$0		$0		$0	
GRAND TOTAL EXPENSES	$0		$0		$0		$0	
REVENUES								
Amount & Percentage of Total Anticipated From:	**AMOUNT**	**%**	**AMOUNT**	**%**	**AMOUNT**	**%**	**AMOUNT**	**%**
State Appropriations	$		$		$		$	
Federal Grants/Contracts								
State Grants/Contracts								
Private Grants/Contracts								
Tuition	$9,469		$18,940		$28,409		$37,845	
Fees	$3,771		$7,540		$11,131		$15,080	
Other (specify)								
TOTAL	$13,240		$26,480		$39,540		$52,925	

BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 22, 2019

Item E.9.   **University of Louisiana System's** request for approval of System Universities' 2019-20 Promotions in Faculty Rank and Recommendations for Tenure.

EXECUTIVE SUMMARY

Annually each UL System campus submits recommendations for promotions in faculty rank and tenure. This year, 127 faculty members were recommended for promotion in rank, with 68 faculty members recommended for tenure.

With respect to promotion in rank, 58 faculty members across the UL System were recommended for promotion to the rank of Professor and 69 to the rank of Associate Professor. Our review suggests that the recommended faculty met all respective guidelines.

A total of 68 faculty members across the System were recommended for tenure and rationales were provided for the 12 faculty members to whom "early" tenure was recommended (i.e., before the six-year probationary term). In these cases, exceptions were considered on the basis of outstanding performance and/or early tenure review was a condition of acceptance of employment. Board policy provides for such exceptions.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves System Universities' 2019-20 Promotions in Faculty Rank and Recommendations for Tenure.

UNIVERSITY OF LOUISIANA SYSTEM

Promotions and Tenure
2019-20

| Institutions | Promotions | | | | Tenure | |
| | To Associate | | To Professor | | | |
	No.	% at rank	No.	% at rank	No.	Tenure Rate
Grambling State University	3	22.3%	2	18.8%	5	48.7%
Louisiana Tech University	6	27.3%	7	20.1%	9	49.0%
McNeese State University	6	18.5%	7	20.1%	7	53.8%
Nicholls State University	8	25.0%	2	14.0%	9	42.0%
Northwestern State University	17	25.0%	6	20.0%	8	46.0%
Southeastern Louisiana University	9	19.0%	8	23.0%	9	40.0%
University of Louisiana at Lafayette	12	20.8%	8	25.3%	14	48.5%
University of Louisiana at Monroe	6	23.2%	9	20.3%	5	48.0%
University of New Orleans	2	26.0%	9	34.0%	2	60.0%
UL System Totals	**69**		**58**		**68**	

Item E.10.   Consideration of Fall 2019 Action Plans for Improving Student Outcomes: *Response to Board of Regents Report on Academic Affairs Policy 2.18 – Fall 2018 Implementation.*

EXECUTIVE SUMMARY

In April 2016, after four years of pilot efforts, the Louisiana Board of Regents (BoR) approved revisions to *Academic Affairs 2.18: Minimum Placement Requirements for Entry-Level, College-Level Mathematics and English* to allow enrollment in a college-level math or English course with a 1-point deficit in the 19 ACT Math (M-ACT) or 2-point deficit in the 18 ACT English subscore, provided students were also enrolled in a 1-3 credit hour co-requisite support component. At the December 2017 BoR meeting, in response to national emphasis on co-requisite delivery and requests from institutions for more flexibility in admissions and placement, the Board approved another revision. On a pilot basis, the 2017 policy allows a campus to place students with up to 3 points below the minimum subscore (as low as 15 ACT English; 16 ACT Math) to be enrolled in an entry-level, college-level English or math course, provided that the campus provides a 1-3 hour/week co-requisite support component to promote student learning. Student success was to be monitored with an update and recommendation to the BoR in Spring 2019 and 2020 regarding impact and recommendations concerning pilot continuation.

In June 2019 a progress report on the 2017 pilot was presented by Regents staff based on Fall 2018 data. Analysis conducted by Regents staff was restricted to performance of students enrolled in a set of five introductory freshman courses included on the Master Articulation Matrix: English Composition; Contemporary Math; Applied Algebra; Finite Math; and College Algebra. The review focused on students with ACT English scores less than 18 and/or Math less than 19. "Passing" a course was defined as earning a grade of A, B, or C and the one-semester review used a 60% pass rate as a preliminary indicator of a university's success in the pilot. The report indicated, while many institutions achieved success with those students who enrolled in an English or math course with less than the minimum placement score (i.e., ULM with an 86% pass rate in entry level ENGL and GSU with an 84% pass rate in College Algebra), there was room for improvement. Those institutions with pass rates (grades of C or better) below 60 percent were asked to submit a management board approved action plan for improving student outcomes for Fall 2019 implementation.

The following table identifies courses offered by member institutions of the University of Louisiana System that did not meet the 60% pass-rate threshold. All of the institutions submitted action plans for Fall 2019 with interventions and support designed to improve the mastery of course content which will lead to improved student success. Approval of the actions plans by the management board is requested at this time.

Institution	Count	% Pass
ENGL <18		
McNeese	86	58%
Grambling	27	52%
Nicholls*	4	25%
Contemporary Math <19		
Nicholls*	5	56%
Applied Algebra <19		
ULM	249	48%
Finite Math <19		
LA Tech	13	31%
College Algebra <19		
UL Lafayette	2	0%
SLU	6	0%
LA Tech	3	33%
McNeese	81	58%
ULM	30	23%

*Note. There were data errors. Students enrolled in the courses noted were not part of the co-requisite pilot.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves the Fall 2019 Action Plans for Improving Student Outcomes: Response to the Board of Regents Report on Academic Affairs Policy 2.18 – Fall 2018 Implementation.

ACTION PLANS for STUDENT SUCCESS in GATEWAY COURSES
(ENGLISH and MATH)

Institution: Grambling State University	Date: August 9, 2019
Contact Person & Contact Info (email, telephone) Dr. Beatrice McKinsey, mckinseyb@gram.edu, 318-274-4488	

Gateway Freshman English & Math Courses

List Freshman degree-credit English and Math courses offered: Dept & Rubric, Title. Add pass rates (grades of A/B/C) from June 2019 BoR report and from available campus data. If unknown, enter UNK.

Freshman Degree-Credit English & Math Courses Offered: Dept + Rubric, Title	Pass Rates – by Placement, if known/reported		
	ALL	<18 Engl; <19 Ma	19-20 Math
ENG 101 Freshman Composition		52%	NA
Math 131 College Algebra		84%	82%

ACTION PLANS: *Required* for courses in June/2019 BoR report with <60% pass rates; *Optional* for others.

For each course, describe what corresponding support was provided in Fall 2018, particularly for students enrolled with less than the minimum or recommended English/Math placement score. Provide a detailed explanation of what efforts and interventions will be provided for 2019-20 to improve student outcomes. The expectation is that significant changes are being made to bolster student success in 2019-20 in those courses that resulted in <60% passage rates in Fall 2018.

Course: ENG 093

Fall/2018 Support:

During Fall 2018, ENG 093 and ENG 101 were taught as co-requisites. Faculty implemented contextualized and strategy approaches to grammar and composition instruction: questioning, frames, sentence combining, transformation exercises, sentence modeling, sentence expansion, sentence rewriting, discovery, essay editing, self-correction strategies, process methods, and reading-based writing. The professors utilized lessons that were closely linked with the learning outcomes associated with ENG 101. The Learning Management System, Canvas, was used to make resources readily available to students. Students were required to review the information that had been placed in modules in Canvas. These modules supported mastery learning. Students were required to master the material in one module before moving to the next.

Current (2019-20) Plan:

The English Faculty will be returning to the methods that were utilized in past years that increased student success for those enrolled in the pilot program. Ms. Catherine Bonner will be named the coordinator of the English pilot program. She has 6 years of experience working with this program. At the 2015 SACSCOC annual meeting she co-facilitated a group discussion that highlighted the success of the GSU English pilot program. The title of the presentation was *Utilization of a "Speak Student" Approach for Teaching English Composition to Underprepared Freshman Students"*. Ms. Bonner realized that a traditional teaching approach of *lecturing* was ineffective with the current generation of students. Ms. Bonner came to this realization after giving a lecture that she thought was excellent. At the end of this lecture she noticed a student whose eyes were glazed over. Ms. Bonner questioned the student regarding his thoughts on the content. The student responded by saying "Ms. Bonner Speak Student." She later reflected upon what the student had said and changed her teaching approach. Ms. Bonner's mantra became "engagement, without sacrificing rigor." She created writing assignments that were of interest to students. One assignment focused on family history. She incorporated the use of social media into the course. She utilized group competitions for various assignments. Her teaching approach focused on addressing grammar deficiencies while working to ensure students acquired the competencies associated with the freshman composition course (ENG 101). The use of these strategies resulted in at least 70% of pilot students demonstrating that they had successfully addressed "gaps in knowledge" by mid-semester.

The *Student Success Strategies* that Ms. Bonner developed will be utilized during the 2019/20 academic year to teach students who are enrolled in the English Pilot program. Additionally, faculty teaching in the pilot program will integrate the use of the writing laboratory into class requirements. Assistants working in the writing lab will review writing assignments and provide immediate feedback to students. Lastly to further support student success, class sizes will not exceed 20. This will support the ability of the faculty to provide individualized attention.

(MATH 099 & MATH 131.)

Course: MATH 099 and MATH 131
Fall/2018 Support:
MATH 099 and MATH 131 were taught in the Math Pilot as a co-requisite. The two math courses were linked together and taught by the same instructor. MODUMATH and other interactive software were used to enhance student learning and to eliminate deficiencies that prevented success in college algebra. The MATH Clinic was integrated into the resources that students were required to use. Peer tutors in this Clinic facilitated tutoring services.
Current (2019-20) Plan:
The strategies used for Fall 2018 will be continued.

Connie Walton

Provost/Chief Academic Officer

8/9/19

Date

ACTION PLANS for STUDENT SUCCESS In GATEWAY COURSES
(ENGLISH and MATH)

Institution: Louisiana Tech University	Date: 8/9/2019
Contact Person & Contact Info (email, telephone) Dr. Terry McConathy, tmm@latech.edu (318) -4262	

Gateway Freshman English & Math Courses

List Freshman degree-credit English and Math courses offered: Dept & Rubric, Title. Add pass rates (grades of A/B/C) from June 2019 BoR report and from available campus data. If unknown, enter UNK.

Freshman Degree-Credit English & Math Courses Offered: Dept + Rubric, Title	Pass Rates – by Placement, if known/reported		
	ALL	<18 Engl; <19 Ma	19-20 Math
Math 101 College Algebra	23	33%	50%
Math 125 Finite Math	14	31%	0%

ACTION PLANS: *Required* for courses in June/2019 BoR report with <60% pass rates; *Optional* for others.

For each course, describe what corresponding support was provided in Fall 2018, particularly for students enrolled with less than the minimum or recommended English/Math placement score. Provide a detailed explanation of what efforts and interventions will be provided for 2019-20 to improve student outcomes. The expectation is that significant changes are being made to bolster student success in 2019-20 in those courses that resulted in <60% passage rates in Fall 2018.

Course: MATH 101 College Algebra

Fall/2018 Support:
Louisiana Tech offers the Bridge to Bulldogs Program ("Bridge") for students who otherwise meet admission criteria except for their MATH ACT (17-18). Bridge students have a high school GPA of 3.0 or greater. Louisiana Tech offers the Bridge to Bulldogs Program ("Bridge") for students who otherwise meet admission criteria except for their MATH ACT (17-18). Bridge students have a high school GPA of 3.0 or greater. Students participating in this program enroll in a 5 SCH Applied Algebra co-requisite delivery course (MATH 103 B&C) in a Summer II term or a Fall term. Bridge students are provided extra tutoring support and have weekly meetings with Mrs. Melanie Peel, Louisiana Tech's Director of Students in Transition. Mrs. Peel is engaged with the students to provide both academic and personal support. Required study hall hours are mandated and monitored. Bridge mentors (student leaders) provide additional support as participants matriculate through the program. Since some degree programs do not accept the applied algebra course, some students must take college algebra as the subsequent math course for Bridge requirements.

Current (2019-20) Plan:

The Louisiana Tech Mathematics and Statistics Program faculty actively recruit students to take the Applied Algebra course (102/103) if we find they have been inappropriately advised to take College Algebra. Additionally, the Director of Students in Transition corresponds with academic deans to verify the required math courses for curricula.

Key Mathematics and Statistics Faculty regularly meet with the Bridge to Bulldogs team to monitor student recruitment, retention, and success. Faculty plan to continue to monitor grade distributions for courses, including the entry level mathematics and statistics classes. Faculty teaching entry level mathematics and statistics courses are engaged in continuous improvement of courses through review of common syllabi; textbook selection; course-supporting software selection; and peer mentoring for new faculty, adjuncts, and graduate teaching assistants. In Spring 2019, the Program of Mathematics and Statistics appointed five faculty who teach entry level mathematics and statistics courses to serve on a task force to evaluate current textbook-supported software.

The data provided to Louisiana Tech regarding the students represented cannot be verified. We will continue to monitor the persistence of first-year students with <19 Math ACT in both Math 101 and 125 to identify pathways and supplemental instruction opportunities.

(Add course blocks as needed; delete those not needed.)

Course: Finite Math

Fall/2018 Support:
Louisiana Tech offers the Bridge to Bulldogs Program ("Bridge") for students who otherwise meet admission criteria except for their MATH ACT (17-18). Bridge students have a high school GPA of 3.0 or greater. Students participating in this program enroll in a subsequent math based on the degree requirements. Some curricula require MATH 125 (Finite Math), MATH 112 (Trigonometry), or MATH 130 (Contemporary Math). Bridge students are provided extra tutoring support and have weekly meetings with Mrs. Melanie Peel, Louisiana Tech's Director of Students in Transition during the subsequent math requirement. Mrs. Peel is engaged with the students to provide both academic and personal support. Required study hall hours are mandated and monitored. Bridge mentors (student leaders) provide additional support as participants matriculate through the program.

Current (2019-20) Plan:
The Louisiana Tech Mathematics and Statistics Program faculty actively recruit students to take the Applied Algebra pathway (Math 130) if we find they have been inappropriately advised to take College Algebra and Finite Math. Additionally, the Director of Students in Transition corresponds with academic deans to verify the required math courses for curricula.

Key Mathematics and Statistics Faculty regularly meet with the Bridge to Bulldogs team to monitor student recruitment, retention, and success. Faculty plan to continue to monitor grade distributions for courses, including the entry level mathematics and statistics classes. Faculty teaching entry level mathematics and statistics courses are engaged in continuous improvement of courses through review of common syllabi; textbook selection; course-supporting software selection; and peer mentoring for new faculty, adjuncts, and graduate teaching assistants. In Spring 2019, the Program of Mathematics and Statistics appointed five faculty who teach entry level mathematics and statistics courses to serve on a task force to evaluate current textbook-supported software.

_____   _____
Provost/Chief Academic Officer   Date

ACTION PLANS for STUDENT SUCCESS in GATEWAY COURSES
(ENGLISH and MATH)

Institution: McNeese State University	Date:8/1/2019
Contact Person & Contact Info (email, telephone) Keagan LeJeune (clejeune@mcneese.edu, 337-475-5325)	

Gateway Freshman English & Math Courses

List Freshman degree-credit English and Math courses offered: Dept & Rubric, Title. Add pass rates (grades of A/B/C) from June 2019 BoR report and from available campus data. If unknown, enter UNK.

Freshman Degree-Credit English & Math Courses Offered: Dept + Rubric, Title	Pass Rates – by Placement, if known/reported		
	ALL	<18 Engl; <19 Ma	19-20 Math
ENGL 101: Freshman Composition I	71%	58%	

ACTION PLANS: *Required* for courses in June/2019 BoR report with <60% pass rates; *Optional* for others.

For each course, describe what corresponding support was provided in Fall 2018, particularly for students enrolled with less than the minimum or recommended English/Math placement score. Provide a detailed explanation of what efforts and interventions will be provided for 2019-20 to improve student outcomes. The expectation is that significant changes are being made to bolster student success in 2019-20 in those courses that resulted in <60% passage rates in Fall 2018.

Course: ENGL 100 - College Composition and Mechanics/ ENGL 101 - English Composition I
Fall/2018 Support: n/a
Current (2019-20) Plan: Report to BGS advisors if a student does not turn in major assignments for ENGL 101 (essays) if more than 1 week past the due date elapses for students concurrently enrolled in ENGL 100.:

Course: ENGL 100 - College Composition and Mechanics/ ENGL 101 - English Composition I
Fall/2018 Support: n/a
Current (2019-20) Plan: Report to BGS advisors if a student has extensive absences (more than 3 days without significant contact with instructor) for students concurrently enrolled in ENGL 100.

Course: ENGL 100 - College Composition and Mechanics/ ENGL 101 - English Composition I
Fall/2018 Support: n/a
Current (2019-20) Plan: Investigate re-instituting previous policy regarding provisional admittance. Previous policy: full admittance to the university was provisional upon successful completion of the co-req English 100/101 during the first semester and enrollment in English 102 throughout the second semester.

Course: ENGL 100 - College Composition and Mechanics/ ENGL 101 - English Composition I
Fall/2018 Support: n/a
Current (2019-20) Plan: Train current instructors of ENGL 100 on 2019-20 action plan concerning early alert reporting

_____   8.5.19

Provost/Chief Academic Officer   Date

ACTION PLANS for STUDENT SUCCESS in GATEWAY COURSES
(ENGLISH and MATH)

Institution: McNeese State University	Date:8/6/2019
Contact Person & Contact Info (email, telephone) Karen Aucoin (aucoin@mcneese.edu, 337-475-5325)	

Gateway Freshman English & Math Courses

List Freshman degree-credit English and Math courses offered: Dept & Rubric, Title. Add pass rates (grades of A/B/C) from June 2019 BoR report and from available campus data. If unknown, enter UNK.

Freshman Degree-Credit English & Math Courses Offered: Dept + Rubric, Title	Pass Rates – by Placement, if known/reported		
	ALL	<18 Engl; <19 Ma	19-20 Math
MATH 113: College Algebra	61.4%	58%	46%
MATH 105: Contemporary Math	61%*	UNK	UNK

*Based on Fall 18 - Spring 19 data

ACTION PLANS: *Required* for courses in June/2019 BoR report with <60% pass rates; *Optional* for others.

For each course, describe what corresponding support was provided in Fall 2018, particularly for students enrolled with less than the minimum or recommended English/Math placement score. Provide a detailed explanation of what efforts and interventions will be provided for 2019-20 to improve student outcomes. The expectation is that significant changes are being made to bolster student success in 2019-20 in those courses that resulted in <60% passage rates in Fall 2018.

Course: Math 113 - College Algebra
Fall/2018 Support: n/a
Current (2019-20) Plan: We first note that the College Algebra data given above reflects only the Fall 2018 semester. In the Spring 2019 semester, 20 students with MathACT<19 were enrolled in the developmental co-rerequisite courses (Math113 and Math 110 (College Algebra Recitation)). The pass rate for these students was 80%. **Plans/interventions for all sections of College Algebra:** We will implement weekly review sessions in addition to final exam reviews to support students who are struggling with concepts taught in the classroom.   **Plans/Interventions for sections of College Algebra (Math 113) taught with the corequisite course,** **College Algebra Recitation(Math 110):** We will report to BGS advisors if a student has excessive absences (more than 3 days without significant contact with instructor) for students concurrently enrolled in MATH 110. We will train current instructors of MATH 110 on the 2019-20 action plan concerning early alert reporting.

Course: Math 105 – Contemporary Mathematics
Fall/2018 Support: n/a
Current (2019-20) Plan: This course was added to our Course Catalog in 2017. Since that time, each time we have offered the course, enrollment has been low. We hope to increase enrollment in this course by the following means:

We plan to increase awareness of this course campus-wide as an option for fulfilling general education mathematics requirements.

We plan to identify those Departments/Degree Programs on our campus which might want to consider including this course within their math sequence.

We plan to investigate how Contemporary Math courses are used as part of a Math Pathway at other institutions in Louisiana.

_____
Provost/Chief Academic Officer

_8.5.19_
Date

ACTION PLANS for STUDENT SUCCESS in GATEWAY COURSES
(ENGLISH and MATH)

Institution: Nicholls State University	Date: August 6, 2019
Contact Person & Contact Info (email, telephone) Dr. Sue Westbrook, sue.westbrook@nicholls.edu, 985-448-4011	

Gateway Freshman English & Math Courses

List freshman degree-credit English and Math courses offered: Dept & Rubric, Title. Add pass rates (grades of A/B/C) from June 2019 BoR report and from available campus data. If unknown, enter UNK.

Freshman Degree-Credit English & Math Courses Offered: Dept + Rubric, Title	Pass Rates – by Placement, if known/reported		
	ALL	<18 Engl; <19 Ma	19-20 Math
ENGL 101 English Composition I	25%	25%	
MATH 117 Contemporary Math and Quantitative Analysis I	82%	56%	85%
MATH 100/101 College Algebra	71%	70%	71%

ACTION PLANS: *Required* for courses in June/2019 BoR report with <60% pass rates; *Optional* for others.

For each course, describe what corresponding support was provided in Fall 2018, particularly for students enrolled with less than the minimum or recommended English/Math placement score. Provide a detailed explanation of what efforts and interventions will be provided for 2019-20 to improve student outcomes. The expectation is that significant changes are being made to bolster student success in 2019-20 in those courses that resulted in <60% passage rates in Fall 2018.

Course: ENGL 101 English Composition I
Fall/2018 Support: No additional support is provided for students enrolled in ENGL 101. Nicholls offers ENGL 100 in conjunction with ENGL 100L. The courses combined offer supplemental instruction for topics covered in ENGL 101. Earning credit in ENGL 100 is equivalent to earning credit in ENGL 101.
Current (2019-20) Plan: Moving forward, the university will work with the Board of Regents to insure that data submitted is accurate and truly reflects the placement process at Nicholls. In addition, efforts will be made to make certain that students are properly placed into English courses based on pre-requisite course work, ACT, SAT, or ACCUPLACER scores. In particular, Nicholls will work to insure that students with scores less than those established by the Board of Regents for placement into college-level English courses are enrolled in appropriate co-requisite instruction courses. Nicholls will continue to help students identify resources that may provide assistance in successfully completing English courses. Finally, Nicholls will continue to request progress reports from faculty on students enrolled in co-requisite instruction courses in English.

Course: MATH 117 Contemporary Math and Quantitative Analysis I
Fall/2018 Support: No additional support is provided for students enrolled in MATH 117. Nicholls offers MATH 116 in conjunction with MATH 116L. The courses combined offer supplemental instruction for topics covered in MATH 117. Earning credit in MATH 116 is equivalent to earning credit in MATH 117.
Current (2019-20) Plan: Moving forward, the university will work with the Board of Regents to insure that data submitted is accurate and truly reflects the placement process at Nicholls. In addition, efforts will be made to make certain that students are properly placed into mathematics courses based on pre-requisite course work, ACT, SAT, or ACCUPLACER scores. In particular, Nicholls will work to insure that students with scores less than those established by the Board of Regents for placement into college-level mathematics courses are enrolled in appropriate co-requisite instruction courses. Nicholls will continue to help students identify resources that may provide assistance in successfully completing mathematics courses. Finally, Nicholls will continue to request progress reports from faculty on students enrolled in co-requisite instruction courses in mathematics.

Sue Westbrook

Provost/Chief Academic Officer

8/6/19

Date

ACTION PLANS for STUDENT SUCCESS in GATEWAY COURSES
(ENGLISH and MATH)

Institution: Southeastern Louisiana University	Date: August 6, 2019
Tena L. Golding, Provost and Vice President for Academic Affairs provost@southeastern.edu Phone: 985-549-2316 Fax: 985-549-2304 SLU Box 10798 Hammond, LA 70402	

Gateway Freshman English & Math Courses

List Freshman degree-credit English and Math courses offered: Dept & Rubric, Title. Add pass rates (grades of A/B/C) from June 2019 BoR report and from available campus data. If unknown, enter UNK.

Freshman Degree-Credit English & Math Courses Offered: Dept + Rubric, Title	Pass Rates – by Placement, if known/reported		
	ALL	<18 Engl; <19 Ma	19-20 Math
MATH 151: College Algebra Fundamentals (CMAT 1213)		0% (6 students)	38% (208 students)

ACTION PLANS: *Required* for courses in June/2019 BoR report with <60% pass rates; *Optional* for others.

For each course, describe what corresponding support was provided in Fall 2018, particularly for students enrolled with less than the minimum or recommended English/Math placement score. Provide a detailed explanation of what efforts and interventions will be provided for 2019-20 to improve student outcomes. The expectation is that significant changes are being made to bolster student success in 2019-20 in those courses that resulted in <60% passage rates in Fall 2018.

Course: MATH 151 (College Algebra Fundamentals; CMAT 1213)
Fall/2018 Support: • Students receive two hours/week extra class time with mathematics instructor for additional/supplemental instruction • Students required to complete workbook pages that are graded by instructor to give students feedback • University provides undergraduate tutors to staff our Math Lab five days/week to help students complete their online homework and quizzes
Current (2019-20) Plan: • Hold training session for Freshmen advisors in the Center for Faculty Excellence to provide a course overview, training on Pearson's *MyMathLab (MML)*, give them suggestions for advising under-performing students (the *benefits of practice tests*, math lab hours, etc.), and to emphasize to advisors that the data shows that student work habits align with success • Provide Center for Student Excellence (CSE) Tutoring Center Coordinator with access to *MyMathLab* gradebook to monitor student use. • Mathematics instructors teaching MATH 151 will communicate early with CSE advisors regarding *"at risk"* students • CSE tutors will work directly with students in their *MML* account during tutoring sessions • Contact students enrolled in MATH 151 with lower math ACT scores prior to the start of the semester to explain the likelihood of success and encourage them to seek available resources prior to the beginning of the semester • Mathematics instructors will carefully monitor students who fail to complete assignments and contact the students to see them or their advisors. • Students receive two hours/week extra class time with mathematics instructor for additional/supplemental instruction • Students required to complete workbook pages that are graded by instructor to give students feedback • University provides undergraduate tutors to staff our Math Lab five days/week to help students complete their online homework and quizzes

(Add course blocks as needed; delete those not needed.)

Course:
Fall/2018 Support:
Current (2019-20) Plan:

Course:	
Fall/2018 Support:	
Current (2019-20) Plan:	

Course:	
Fall/2018 Support:	
Current (2019-20) Plan:	

Jene L. Golding
Provost/Chief Academic Officer

$8/6/19$
Date

ACTION PLANS for STUDENT SUCCESS in GATEWAY COURSES
(MATH)

Institution: University of Louisiana at Lafayette	Date: August 7, 2019
Contact Person & Contact Info (email, telephone)	
Dr. Bruce Wade, Head, Mathematics Department, bruce.wade@louisiana.edu, (337) 482-5173	

Gateway Freshman English & Math Courses

List Freshman degree-credit English and Math courses offered: Dept & Rubric, Title. Add pass rates (grades of A/B/C) from June 2019 BoR report and from available campus data. If unknown, enter UNK.

Freshman Degree-Credit English & Math Courses Offered: Dept + Rubric, Title	Pass Rates – by Placement, if known/reported		
	ALL	<18 Engl; <19 Ma	19-20 Math
Math 109 (College Algebra, CMAT 1213)	56%	0%	63%

ACTION PLANS: *Required* for courses in June/2019 BoR report with <60% pass rates; *Optional* for others.

For each course, describe what corresponding support was provided in Fall 2018, particularly for students enrolled with less than the minimum or recommended English/Math placement score. Provide a detailed explanation of what efforts and interventions will be provided for 2019-20 to improve student outcomes. The expectation is that significant changes are being made to bolster student success in 2019-20 in those courses that resulted in <60% passage rates in Fall 2018.

Course: Math 109 (College Algebra, CMAT 1213)
Fall/2018 Support:
Tutoring at The Learning Center (TLC). Individual, free drop-in style tutoring.
Current (2019-20) Plan:
1. (SUPPORT) Study Groups at The Learning Center. Supplemental instruction (SI) that is coordinated to the course sections with highly qualified staff working together with instructors of record.
2. (SUPPORT) *Continual Reminders.* Each faculty member is to begin each lecture by writing the days and times of course support components as well as location of the Math Lab. Short summary overviews of the material will be presented during each class meeting, before and after the lecture.
3. (STUDENT OUTCOMES) *Faculty course coordinators.* Coordinators assigned to monitor, unify, supervise, and modify the content of the course.

Fabrice Leroy

August 7, 2019

_____
Assistant Vice President for Academic Affairs
On behalf of Provost/Chief Academic Officer   Date

ACTION PLANS for STUDENT SUCCESS in GATEWAY COURSES
(ENGLISH and MATH)

Institution: University of Louisiana Monroe	Date: August 7, 2019
Contact Person & Contact Info (email, telephone) Chris Michaelides, Associate Dean College of Arts, Education, and Sciences cmichaelides@ulm.edu (318) 342-1243	

Gateway Freshman English & Math Courses

List Freshman degree-credit English and Math courses offered: Dept & Rubric, Title. Add pass rates (grades of A/B/C) from June 2019 BoR report and from available campus data. If unknown, enter UNK.

Freshman Degree-Credit English & Math Courses Offered: Dept + Rubric, Title	Pass Rates – by Placement, if known/reported		
	ALL	<18 Engl; <19 Ma	19-20 Math
MATH 1009 Applied Algebra for College Students		48%	57%
MATH 1011 College Algebra		23%	55%
ENGL 1001 Composition I		86%	

ACTION PLANS: *Required* for courses in June/2019 BoR report with <60% pass rates; *Optional* for others.

For each course, describe what corresponding support was provided in Fall 2018, particularly for students enrolled with less than the minimum or recommended English/Math placement score. Provide a detailed explanation of what efforts and interventions will be provided for 2019-20 to improve student outcomes. The expectation is that significant changes are being made to bolster student success in 2019-20 in those courses that resulted in <60% passage rates in Fall 2018.

Course: MATH 1009 Applied Algebra for College Students

Fall/2018 Support:

- Students with Math ACT scores of 16-18 enrolled concurrently in the MATH 1000 Recitation, twice-weekly small-group learning sessions that supplement MATH 1009.
- Students were encouraged to make use of the Math Resource Center (MRC) for additional practice and available tutoring.
- Students were encouraged to take advantage of their instructors' office hours to ask questions or seek clarification.

Current (2019-20) Plan:

- Students with Math ACT scores of 16-18 will enroll concurrently in the MATH 1000 Recitation, as before.
- A Math faculty member has been tasked with coordinating MATH 1000 sections in order to improve program coherence in the co-requisite program. Recitations will be standardized through a consensus on effective methods and activities.
- To this end, a workshop for Math faculty has been scheduled for Monday, August 12, to be conducted by the Director of the School of Sciences. The workshop will have several goals: (1) to draft a skills evaluation pre-test to be given at the beginning of the semester to all students in MATH 1000 sections in order to determine specific deficiencies and needs; (2) to adopt collaborative and scaffolded small-group activities to address the needs identified; and (3) to make faculty aware that student perceptions of faculty attitudes toward their chances for success affect their ability to persevere.
- The School of Sciences Director will schedule meetings with Math faculty every 3 weeks to evaluate student progress and address issues.
- Data will be collected to measure student progress, identify problems, and compare success rates with previous semesters.
- Math faculty will revise MATH 1009 content coverage to prioritize and devote more time to key topics.

(Add course blocks as needed; delete those not needed.)

Course: MATH 1011 College Algebra

Fall/2018 Support:

- Students were encouraged to make use of the Math Resource Center (MRC) for additional practice and available tutoring.
- Students were encouraged to take advantage of their instructors' office hours to ask questions or seek clarification.

Current (2019-20) Plan:

- Supplemental Instruction (SI) leaders from the ULM Student Success Center will conduct three one-hour recitation sessions per week for students identified as needing additional assistance. SI leaders will attend MATH 1011 lectures to align their materials with content covered by the course instructors.
- In the longer term, Math faculty will consider enhancements to the MRC: (1) explore replacing MyMathLab with the ALEKS tutoring platform, which has produced impressive results at other institutions; and (2) investigate new attendance tracking system that features check-in through mobile devices.
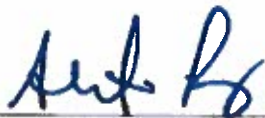

Course: ENGL 1001 Composition I

Fall/2018 Support:

Students with English ACT scores of 16 or 17 enroll concurrently in the ENGL 1000 Composition Recitation.

Current (2019-20) Plan:

Students with English ACT scores of 16 or 17 will continue to enroll concurrently in ENGL 1000.

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Provost/Chief Academic Officer

8/6/19
Date