Item E.1. Grambling State University’s request for approval of a Letter of Intent to establish a Bachelor of Arts in General Studies.

EXECUTIVE SUMMARY

Grambling State University (GSU) requests approval of a Letter of Intent to establish a Bachelor of Arts (BA) in General Studies. The 120 credit hour program is designed to provide the flexibility needed to meet the needs of students who have a variety of backgrounds and interests. Students pursuing this degree will organize their coursework around general education core requirements and a 36 credit hour concentration. The following concentration areas and examples will be available within the proposed BA in General Studies:

1. Social Sciences (Education, Family and Consumer Science, Political Science, Psychology, Sociology)
2. Business (Accounting, Economics, Information Systems, Management, Marketing)
3. Natural Science and Applied Science (Biology, Chemistry, Computer Science, Engineering Technology, Mathematics and Physics)
5. Recreation, Health and Human Services (Kinesiology, Leisure Studies, Therapeutic Recreation, Social Work)
6. Cyber Technology (Computer Science, Criminal Justice, Information Systems)

The curriculum is consistent with established norms for degrees of this type, and such a program is an essential offering of a public university. Currently eight (8) public universities in Louisiana offer an undergraduate degree in General Studies (LSUA, LSUS, McNeese, Northwestern, Southeastern, SUNO, UL Lafayette and ULM). The proposed General Studies program at GSU has different areas of focus which makes it unique. Unlike the existing programs, GSU will offer concentrations in Recreation, Health and Human Services and Cyber Technology.

The potential source of students will be those who want the flexibility to delve into interdisciplinary study and those who have not decided upon a major. For Fall 2016, there were 213 undecided majors compared to the 146 students who were undecided majors in Fall 2014. As enrollment has increased at GSU so has the number of students who are undecided. The proposed General Studies Program will attract many of these “undecided students,” who will be given the opportunity to explore their varied interests. Students who complete the program will be equipped with the skills to prepare them for the Louisiana workforce as well as regional and national employment. The program will also further strengthen skills to prepare students for graduate and professional schools.
The General Studies program will be housed in the Department of History in the College of Arts and Sciences. The Chair of the History Department will manage the proposed program until such time that enrollment might necessitate a coordinator to help facilitate advising and oversight. All courses required of the proposed degree are already offered by the institution and sufficient faculty and infrastructure are in place. As a result, the program can be offered at little to no cost to the institution.

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 a Letter of Intent to establish a Bachelor of Arts in General Studies (CIP Code 24.0102).
MEMORANDUM TO THE BOARD OF SUPERVISORS
OF THE UNIVERSITY OF LOUISIANA SYSTEM

SUBJECT: REQUEST FOR APPROVAL OF A LETTER OF INTENT TO
ESTABLISH A BACHELOR OF ARTS (B.A.) DEGREE PROGRAM
IN GENERAL STUDIES

Grambling State University respectfully requests approval of a Letter of Intent to
establish a Bachelor of Arts (B.A.) degree program in General Studies.

Your favorable consideration of this request would be appreciated.

Sincerely,

Richard J. Gallot, Jr., JD
President

RJG:jj

Attachments
LOUISIANA BOARD of REGENTS

LETTER OF INTENT to DEVELOP a NEW ACADEMIC PROGRAM [Oct 2015]

<table>
<thead>
<tr>
<th>General Information</th>
<th>Date: October 4, 2016</th>
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<tbody>
<tr>
<td>Institution:</td>
<td>Requested CIP, Designation, Subject/Title:</td>
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<tr>
<td>Grambling State University</td>
<td>CIP: 240102</td>
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<tr>
<td></td>
<td>Designation: Bachelors of Arts (B.A.)</td>
</tr>
<tr>
<td></td>
<td>Subject/Title: General Studies</td>
</tr>
</tbody>
</table>

Contact Person & Contact Info:
Roshunda Belton, Ph.D., Chair, Department of History, Grambling State University, Brown Hall 108, 318-274-2256, beltonr@gram.edu; Dr. Rory L. Bedford – 318-274-2114; or Mr. Eldrie Hamilton – 318-274-6321

1. Program Objectives and Content
Describe the program concept: purpose and objectives; basic structure and components/concentrations; etc. Include the draft curriculum.

Grambling State University (GSU) is a co-educational public institution that confers degrees at the bachelors, masters, and the doctorate levels. In bolstering various educational opportunities, GSU promotes and fosters a well-rounded, diverse education. The university is a distinguished institution that produces accomplished graduates sought by global employers and top-tier graduate and professional schools.

The proposed Bachelor of Arts degree in General Studies is a unique program that reflects diversity in learning and instruction. Students gain the opportunity to explore varied interests that extend beyond a particular major. This diverse approach to learning prepares students to succeed in a diversified workforce and equips students with the necessary skills to successfully engage in a productive work environment. The General Studies concentrations reflect interdisciplinary study and current trends in technology.

The proposed General Studies program will offer six (6) concentration areas: 1) Social Sciences, 2) Business, 3) Natural and Applied Science, 4) Communication and Humanities, 5) Fitness and Wellness, and 6) Cyber Technology. The program will require 120 credit hours of which 36 credit hours must be taken in the concentration area. At least 18 hours in the concentration must be at the 300 level or above.

Concentration 1: Social Sciences
Education
Family and Consumer Science (Child Development & Early Literacy)
History
Kinesiology (pedagogy)
Political Science
Psychology
Sociology

Concentration 2: Business
Accounting
Economics
Information Systems
Management
Marketing

Concentration 3: Natural Science and Applied Science
Biology
Chemistry
Computer Science
Engineering Technology
Mathematics and Physics

Concentration 4: Communication and Humanities
  English
  History
  Mass Communication
  Music
  Visual and Performing Arts

Concentration 5: Fitness and Wellness
  Leisure Studies
  Therapeutic Recreation
  Social Work

Concentration 6: Cyber Networking
  Criminal Justice
  Information Systems
  Computer Science

Students that complete the program will be equipped with the skills to prepare them for the Louisiana workforce as well as regional and national employment. The program will also further strengthen skills to prepare students for graduate and professional schools.

The General Studies program will be housed in the Department of History in the College of Arts and Sciences. The Chair of the History Department will manage the program until enrollment requires a coordinator. Since the program stretches across all disciplines, academic advising will be done by faculty from the concentration areas according to the general studies curriculum. The courses in the proposed curriculum are routinely offered; therefore, problems will not arise with advising or student matriculation. The curriculum is designed and the concentrations are grouped to allow students to gain knowledge and skills in various areas that relate to the respective concentrations.

Like students in other academic programs, students in the General Studies Program will be required to meet university-wide service learning requirements. A total of 160 hours of service learning is required for program completion (80 hours from academic courses and 80 hours from community involvement).

<table>
<thead>
<tr>
<th>DRAFT CURRICULM</th>
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<tbody>
<tr>
<td>Bachelor of Arts (B.A.) in General Studies</td>
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<td>120 credit hours</td>
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**Freshman Year**

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<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tr>
<td>First Year Experience 101 &amp; 102</td>
<td>2</td>
</tr>
<tr>
<td>ENG 101 Freshman Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 102 Freshman Composition II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 147 Pre-calculus I</td>
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</tr>
<tr>
<td>MATH 148 Pre-calculus II</td>
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</tr>
<tr>
<td>BIOL 103 Principles of Biology I or BIOL 113</td>
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<tr>
<td>BIOL 104 Principles of Biology II or BIOL 114</td>
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<tr>
<td>HIST 101 Western Civilization I</td>
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<tr>
<td>HIST 104 Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 101 Environmental Chemistry or SCI 101</td>
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</tr>
<tr>
<td>SOC 101 Intro to Social Science</td>
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**Total** 32

**Sophomore Year**

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<tr>
<td>CIS 115 Introduction to Computer &amp; Software Application</td>
<td>3</td>
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<tr>
<td>Course</td>
<td>Units</td>
</tr>
<tr>
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<tr>
<td>ENG 200 World Literature</td>
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<td>ECON 201 Principles of Economics</td>
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<td>ART 210 Intro to Fine and Performing Arts</td>
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<td>GET 300</td>
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### Junior Year

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<tr>
<td>CS 201 Social, Legal, and Ethical Issues in Information Age</td>
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### Senior Year

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<thead>
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<td>SW 405 Cultural Diversity</td>
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<td>PS 201 American National Government</td>
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<tr>
<td>Free Electives</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
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2. **Need**

Outline how this program is deemed essential for the wellbeing of the state, region, or academy (e.g., accreditation, contribution to economic development; related to current or evolving needs within state or region). Cite data to support need: employment projections; supply/demand data appropriate to the discipline and degree level. Also, identify similar programs in the state and explain why the intended one should not be perceived as unnecessary duplication.

The General Studies Program will have significant benefits for students. The program will allow students the opportunity to explore various interests that extend beyond one particular major. In fact, the program stretches across all disciplines and reflects an interdisciplinary approach to learning.

The General Studies Program is well positioned to prepare students to meet the future workforce needs of Northern Louisiana. According to the Louisiana Workforce Commission (LWC) projected figures to 2024, forty (40) general and operational managers are needed each year in Northern Louisiana to keep up with the projected 440 additional positions in the field. Also, social services and managerial positions are growth areas for North Louisiana. LWC reports that North Louisiana will have fifty (50) annual total openings to replace demand and new growth of social services and managerial positions. Graduates of the General Studies Program will fill these projected employment needs.

The Program does not duplicate or compete with any other programs near GSU. Even though Louisiana Tech University (LaTech) and the University of Louisiana at Monroe (ULM) offer degrees in General Studies, the program is not duplicative. The proposed General Studies Program at GSU has different areas of focus. Unlike the programs at LaTech and ULM, GSU will offer concentrations in Fitness and Wellness and Cyber Networking, making it a unique program.
LOUISIANA BOARD of REGENTS

3. Relevance
Explain why this program is an institutional priority at this time. How will it (a) further the mission of the institution and (b) increase the educational attainment or quality of life of the people of Louisiana.

The General Studies Program will provide flexibility to students who desire to explore various interests. Because the curriculum reflects interdisciplinary study and current trends in technology, students will be drawn to the program, resulting in an increase in student retention and degree completion.

The Program is central to GSU’s mission which states that “...the University seeks to reflect in all of its programs the diversity in the world” and “strive[s] for excellence in [the] pursuit of knowledge.” Students that complete the General Studies Program will be prepared for a diversified workforce environment.

Also, the program is unique for the region/area. Not only will this program fill the void in northern Louisiana, but it will also draw students from areas near the state. Because of its uniqueness, the program will attract students from North Louisiana, East Texas, Western Mississippi, and Southern Arkansas. GSU is confident that the program will be successful, and a model for future programs. The program will serve our current students and should be seen as a great opportunity for incoming students.

4. Students
Summarize student interest/demand for the proposed program.

Many students have expressed interest in general studies. The potential sources of students will be those who have various interests and those who have not decided upon a major. For Fall 2016, there were 213 undecided majors compared to the 146 students who were undecided majors in Fall 2014. As enrollment has increased so has the number of students who are undecided majors. The General Studies Program will attract many of these “undecided students,” who will be given the opportunity to explore their varied interests.

With students having the added option of a degree in general studies, this will contribute to student retention. Of the 146 undecided majors in Fall 2014, thirty-one (31) did not return to the University the following academic year. The General Studies Program will help build on students’ interests and provide avenues by which students may explore their interdisciplinary interest, thereby aiding student retention. Additionally, those students who have accumulated excessive hours, in several different majors and/or courses, will also be able to realize degree completion.

The General Studies Program will increase university enrollment and cultivate future employees of the state of Louisiana, the southern region and the nation. The program will also further strengthen skills to prepare students for graduate and professional schools.

5. Cost
Estimate new/additional costs of the projected program for the first five years. Indicate amounts to be absorbed out of current sources of revenue and needs for additional appropriations (if any). Commit to provide adequate funding to initiate and sustain the program. On the separate budget form, estimate new costs and revenues for the first four years.

The total projected cost of the General Studies Program is the same as the current cost for operation of undergraduate programs. The new program will not require additional faculty or administrative assistance. Likewise, no additional expenditures are requested.

Office Space and Classroom Allocation
Existing instructional equipment, classroom space, and technology is enough to support the General Studies Program. No additional funding will be needed in this budget category.
Library Holdings
The A.C. Lewis Memorial Library holds traditional archival, book, and serial collections. The Library partners with several other Louisiana libraries to provide interlibrary loan and a substantial number of research databases. Currently the A.C. Lewis Memorial Library offers access to many digital databases and other resources, volumes, e-books, journals and millions of manuscript pages. GSU's digital resources can be accessed off campus by students, staff, and faculty. The A. C. Lewis Memorial Library also benefits from association with other libraries giving our students access to even more resources. It is a member of the LOUIS (Louisiana Library Network) which connects our library with all the libraries of the state. These resources directly relate to the various concentrations and will prove invaluable for students in the General Studies Program.

CERTIFICATION:

[Signature]

Ellen D. Smiley
Chief Academic Officer

10/4/16
Date

Management Board

Date of Approval by Board
**LOUISIANA BOARD of REGENTS**

**SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR INTENDED PROGRAM**

Institution: Grambling State University  
Date: October 4, 2016

Degree Program, Unit: General Studies

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

### EXPENDITURES

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<th>INDICATE ACADEMIC YEAR:</th>
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<th>SECOND</th>
<th>THIRD</th>
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<td></td>
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<td>FTE</td>
<td>Amount</td>
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### REVENUES

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<td>*Federal Grants/Contracts</td>
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<tr>
<td>*State Grants/Contracts</td>
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<td>$0</td>
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<tr>
<td>*Private Grants/Contracts</td>
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<tr>
<td><strong>Expected Enrollment</strong></td>
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<td>100</td>
<td>145</td>
<td>200</td>
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<tr>
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<td>257,000.00</td>
<td>372,650.00</td>
<td>514,000.00</td>
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<td>Fees</td>
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<td>96,150.00</td>
<td>139,417.50</td>
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<td><strong>TOTAL REVENUES</strong></td>
<td>$264,862.50</td>
<td>$353,150.00</td>
<td>$512,067.50</td>
<td>$706,300.00</td>
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* Describe/explain expected sources of funds in proposal text.
Item E.2. Louisiana Tech University’s request for approval of a Graduate Certificate in Six Sigma Black Belt.

EXECUTIVE SUMMARY

Louisiana Tech University requests approval to offer a Graduate Certificate (GC) in Six Sigma Black Belt. The proposed GC consists of four 3-credit hour courses designed to prepare students in statistical analysis, quality control, experimentation, and team based design. The course sequence is as follows: INEN 514: Statistical Analysis for Six Sigma, INEN 566: Six Sigma and Quality Control, STAT 507: Design and Analysis of Experiments, and INEN 520: Six Sigma Black Belt Project; all courses are available online and on-site.

Individuals who complete the proposed GC will be professionals who can explain Six Sigma philosophies and principles, including supporting systems and tools. Completers will have a thorough understanding of all aspects of the Design, Measure, Analysis, Improve and Control (DMAIC) model in accordance with Six Sigma principles. In addition, all will have basic knowledge of lean enterprise concepts, the ability to identify non-value-added elements and activities, and the skill sets to use specific tools. Acquiring a Six Sigma Black Belt certification not only enhances a professional skill set, but also improves an individual’s marketability for obtaining competitive positions with successful organizations and companies.

LA Tech is building on the success of the Six Sigma Green Belt sequence which they began offering in the summer of 2012. This program has had an average of 42 students per year complete the sequence in the four years that it has been offered; enrollment has grown at a rate of 30% per year. LA Tech conservatively estimates that half of the students who complete the Six Sigma Green Belt sequence program will go on to complete the proposed GC. Students from across the college are interested in taking the classes to earn the certification because of how it will enhance their career marketability. LA Tech projects an initial enrollment of 15 with that number increasing to 35 by Year Five of program implementation. No other universities in the State are offering a similar program.

The four courses required of the proposed GC are already offered as part of existing graduate programs in Industrial Engineering and Engineering Technology Management. No additional faculty, facilities, equipment or library resources are required for program implementation. As enrollments grow in the graduate programs and the proposed GC there may be a need to offer additional sections of the certificate courses during the academic year, possibly through overloads for existing faculty or other faculty hires within the college. The minimal cost associated with this program offering would be offset by revenue from tuition and fees.
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 Louisiana Tech University's request for approval of a Graduate Certificate in Six Sigma Black Belt (CIP Code 14.3501).
OFFICE OF THE PRESIDENT

October 3, 2016

Dr. Daniel D. Reneau
Interim President
The University of Louisiana System
1201 N. Third Street, Suite 7-300
Baton Rouge, LA 70802

Dear Dr. Reneau:

Louisiana Tech University requests approval to offer a new academic graduate certificate program in Six Sigma Black Belt as part of existing graduate degree programs in Industrial Engineering and Engineering & Technology Management in the College of Engineering and Science.

The proposed Six Sigma Black Belt Graduate Certificate supports much-needed workforce development and skills in several jobs listed by the Annual Demand of Top Occupations to the Year 2020. Acquiring a Six Sigma Black Belt certification enhances a professional skill set and improves an individual's marketability for obtaining competitive positions with successful organizations and companies. This Graduate Certificate is relevant to the projected growth of industrial engineering jobs in Louisiana, and a Six Sigma Black Belt demonstrates understanding of lean enterprise concepts, leadership skills, and effective team dynamics.

The proposed Graduate Certificate consists of four 3-hour semester credit courses designed to prepare students in statistical analysis, quality control, experimentation, and team-based design. Building on the success of the Six Sigma Green Belt sequence, we anticipate consistently increasing enrollment and completion rates for the proposed Graduate Certificate. Implementation of the Graduate Certificate does not require any additional faculty, facilities, equipment, or library resources.

Thank you for your consideration of this proposal.

Sincerely,

Leslie K. Guice
President

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

Date: September 1, 2016

<table>
<thead>
<tr>
<th>Campus: Louisiana Tech University</th>
<th>Program: CIP, Graduate Certificate Designation, Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>14.3501 Six Sigma Black Belt Graduate Certificate</td>
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Institutional Contact Person & Contact Info (if clarification is needed)
Dr. Hisham Hegab, Dean, College of Engineering and Science, (318) 257-4647, hhegab@latech.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.

Louisiana Tech University began offering academic Six Sigma Black Belt courses in Fall 2015. This sequence of courses consists of the following four courses (12 semester credit hours): INEN 514 Statistical Analysis for Six Sigma, INEN 566 Six Sigma and Quality Control, STAT 507 Design and Analysis of Experiments, and INEN 520 Six Sigma Black Belt Project. These courses are all available online and on-site. The first students are expected to complete this sequence in Fall 2016. INEN 514, INEN 566, and STAT 507 are established courses. INEN 520 is a new course that is being taught for the first time as a special topics course in Fall 2016. The purpose of this proposal is to seek approval for the Six Sigma Black Belt sequence as a Graduate Certificate.

The Six Sigma Black Belt Graduate Certificate completer will be a professional who can explain Six Sigma philosophies and principles, including supporting systems and tools. A Black Belt should demonstrate team leadership, understand team dynamics, and assign team member roles and responsibilities. Black Belts have a thorough understanding of all aspects of the Design, Measure, Analyze, Improve, and Control (DMAIC) model in accordance with Six Sigma principles. They have basic knowledge of lean enterprise concepts, are able to identify non-value-added elements and activities, and are able to use specific tools.

The descriptions of the courses for the certificate are as follows:

INEN 514 Statistical Analysis for Six Sigma – Application of statistical techniques to industrial problems, relationships between experiential measurements using analysis of variance models.

INEN 566 Six Sigma and Quality Control – Principles of quality as applied to engineering processes. Applications to the engineering workplace and industrial/academic research will be emphasized.

STAT 507 Design and Analysis of Experiments – Analysis of variance for factorial, randomized, incomplete block, repeated measures and split-plot designs, multiple comparisons, fixed, random, and mixed effect models.

INEN 520 Six Sigma Black Belt Project - Team-based design project with emphasis on DMAIC model and Six Sigma principles. Analysis of variance, quality control, design of experiments, regression analysis, and process analysis.

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.

The proposed Six Sigma Black Belt Graduate Certificate supports much-needed workforce development and skills in several jobs listed by the Annual Demand of Top Occupations to the Year 2020 including the following in Demand Level I and Level 2: SOC 17-2122 Industrial Engineers, SOC 11-3051 Industrial Production Managers, and SOC 11-9041 Engineering Managers, thus requiring approximately 190 graduates (replacements for existing and new jobs combined) each year in Louisiana. The Louisiana Workforce Commission forecasts that 250 new industrial engineering jobs will be created, a growth rate of 14%. This demand far exceeds what Louisiana 4-year colleges can supply each year.

Acquiring a Six Sigma Black Belt certification not only enhances a professional skill set, but also improves an individual’s marketability for obtaining competitive positions with successful organizations and companies. We have students from across the college interested in taking the classes to earn the certification because of how it enhances their career marketability.

No other universities in the State are offering a similar program.

3. Students

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

LA BoR – AA 2.05 - Oct 2015
Louisiana Tech University began offering academic Six Sigma Green Belt coursework in Summer 2012. This program has had an average of 42 students per year complete the sequence in the four years that it has been offered. Enrollment in the Six Sigma Green Belt sequence grew at a rate of 30% per year. The students completing the Six Sigma Green Belt sequence will feed into the Six Sigma Black Belt Graduate Certificate program. We conservatively estimate that half of the students that complete the Six Sigma Green Belt sequence program will go on to complete the Six Sigma Black Belt Graduate Certificate program. Based on these assumptions, we project the enrollment for the program over the next five years will be the following.

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<th>Year</th>
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<td>2019-20</td>
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<td>2020-21</td>
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4. Accreditation
Describe plan for achieving program accreditation.

This certificate will be accredited through the Southern Association of Colleges and Schools as are all of the graduate programs in the college.

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 Six Sigma Black Belt Graduate Certificate will be offered by the existing faculty of the Industrial Engineering and Engineering and Technology Management faculty at Louisiana Tech University. All courses for the program are offered as part of other graduate degree programs in Industrial Engineering and Engineering and Technology Management. This certificate program will not require any additional faculty, facilities, equipment, or library resources.

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).

There are no additional initial costs to offer this certificate program as the majority of the courses for the certificate have already been established as part of the master’s in industrial engineering and master’s in engineering and technology management programs and are currently being offered. As enrollments grow in these programs and the black belt certificate program, there may be a need to offer additional sections of the certificate courses during the academic year, possibly through overloads for existing faculty or other faculty hires within the college. This cost would be offset by revenue from tuition and fees.

Projected revenue on the budget sheet is based on current tuition and fee rates of $774 and $320, respectively, per three credit hour course with the assumption that the certificate students would take 2-3 courses per year.

CERTIFICATIONS:

Primary Administrator for Proposed Certificate

Provost/Chief Academic Officer

Management Board/System Office

LA BoR – AA 2.05 - Oct 2015
SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR PROPOSED CERTIFICATE

Institution: Louisiana Tech University
Date: September 2, 2016

Certificate Program, Unit: Six Sigma Black Belt, Industrial Engineering
FTE = Full Time Equivalent (use the institution's standard definition and provide that definition).

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* Describe/explain expected sources of funds in proposal text.
BOARD OF SUPERVISORS FOR THE 
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

October 27, 2016

Item E.3. McNeese State University’s request for approval to award an Honorary Doctorate in Humane Letters to Mr. George Swift at the Fall Commencement Exercises.

EXECUTIVE SUMMARY

McNeese State University requests approval to award an Honorary Doctorate of Humane Letters to Mr. George Swift at the Fall 2016 Commencement Exercises. Mr. Swift currently serves as President/CEO of the Southwest Louisiana Economic Development Alliance. He has played a courageous role during Louisiana legislative sessions. Also, he has led chambers of commerce across the state in championing the importance of higher education to the success of business development.

Due in large part to Mr. Swift’s leadership, economic development in Southwest Louisiana has become the envy not only of other regions in the state but of metropolitan regions across the nation and throughout the world. Mr. Swift and his team are housed at the Southwest Louisiana Entrepreneurial and Economic Development Center (SEED) located on the University’s campus. The SEED center is where Mr. Swift has developed an international reputation for industrial site selection and commercial development. Thus, it is not unusual for industrial planners in the region to begin their planning by contacting him.

The priceless relationship between McNeese and its local business community is largely due to the support McNeese has received from Mr. Swift. Without his support for higher education in general and for McNeese in particular, it is highly unlikely that the SEED Center would be such a vital aspect of McNeese’s innovation and entrepreneurship curriculum. Mr. Swift’s substantial achievements along with his unerring support to the University and to Louisiana clearly warrant the granting of the honorary doctorate.

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 to award an Honorary Doctorate in Humane Letters to Mr. George Swift at the Fall Commencement Exercises.
October 4, 2016

Dr. Daniel D. Reneau, Interim President
University of Louisiana System
1201 North Third Street
Suite 7-300
Baton Rouge, LA  70802

Dear Dr. Reneau:

Enclosed are (5) copies of McNeese State University's request to grant an Honorary Doctorate of Humane Letters to Mr. George Swift, to be placed on the ULS Board of Supervisors’ agenda for consideration and approval at the October 27, 2016 meeting.

Thank you for your attention in this matter.

Sincerely,

Philip C. Williams
President

Is
Enclosures
September 23, 2016

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

Dear Dr. Reneau:

I request approval for McNeese State University to grant an Honorary Doctorate of Humane Letters degree to Mr. George Swift, to be awarded during the December 2016 commencement exercises at McNeese. Mr. Swift currently serves as President/CEO of the Southwest Louisiana Economic Development Alliance (the “Alliance.”) The Alliance is an umbrella organization comprised of three organizations: (1) the Southwest Louisiana Chamber of Commerce; (2) the Southwest Louisiana Chamber Foundation, which serves as the Chamber’s nonprofit fundraising arm; and (3) the Southwest Louisiana Partnership for Economic Development, which is comprised of regional elected and appointed officials involved in economic development.

Upon my arrival here at McNeese, Mr. Swift took it upon himself to introduce me to our Congressional delegation in Washington and to other key Congressional leaders and their staff. More importantly, he has played a courageous role during Louisiana legislative sessions, when business interests were being used by some leaders as an excuse to close universities and cut funding to higher education. He not only defended higher education, but formed a statewide business coalition to meet with the Governor and key legislators to convince them that higher education was important to successful business operations, and especially to attract industrial investment to Southwest Louisiana.

Due in large part to Mr. Swift’s leadership, economic development in Southwest Louisiana has become the envy not only of other regions in the state of Louisiana, but of metropolitan regions all across the nation and throughout the world. During this most recent decade, we have come to consider commercial and industrial development in terms of billions rather than millions of dollars. When projects under construction or in the planning stages recently topped $100 billion, it became evident to civic officials in this region that industrial planners were no longer going to Baton Rouge first to determine their investment strategies. Instead, they had learned to begin their planning by contacting Mr. Swift and his team at the SEED Center, where he has developed an international reputation for industrial site selection and commercial development.

When I have spoken about the SEED Center publicly, I often tell groups that McNeese is the only university in the nation that has a regional chamber of commerce located on its campus. So far, no one has proven me wrong! This priceless relationship between a regional university and the local business community is largely due to the support we have received from Mr. Swift. Without his support for higher education in general and for McNeese in particular, it is highly unlikely that the SEED Center would now be such a vital aspect of our innovation and entrepreneurship curriculum.
I have attached a proposed ULS Board resolution for your review along with a memorandum to me from our Provost and Vice President for Academic and Student Affairs—Dr. Jeanne Daboval—and a letter to me from the Honorary Degree Nominating Committee, representing academic administration, faculty, and alumni support for this degree. Thank you for your consideration of this request to honor Mr. Swift for his many contributions.

Sincerely,

[Signature]

Philip C. Williams
President
MEMORANDUM

TO:       Dr. Philip C. Williams, President

FROM:     Jeanne Daboval, Provost and Vice President for Academic and Student Affairs

SUBJECT:  Academic Advisory Council Action-Honorary Degree

DATE:     September 27, 2016

The Academic Advisory Council (AAC) unanimously approved the recommendation of the Ad Hoc Honorary Degree Committee to award an honorary degree to Mr. George Swift, Jr. The AAC reviewed the recommendation at the September 26, 2016 meeting.

Copy:     Dr. Nikos Kiritsis, Ad Hoc Honorary Degree Chairman

[Signature]

Philip C. Williams, President
McNeese State University
Date: 9/27/2016
September 22, 2016

Dr. Philip Williams, President
McNeese State University

Dear Dr. Williams,

The Honorary Degree Committee comprised of Dr. Musa Essayyad, Dean, College of Business, Mrs. Joyce Patterson, Director for Alumni Affairs, and myself reviewed all background information received supporting Mr. George Swift’s recommendation for an honorary Doctor of Humane Letters degree.

As the leader of the Southwest Louisiana Economic Development Alliance, Mr. George Swift has been instrumental in developing and fostering the relationship between McNeese State University and the Southwest Louisisna Business community.

Based on the evidence submitted, we wholeheartedly support this recommendation.

Regards,

Dr. Nikos Kritsis
Dean of the College of Engineering & Computer Science
Executive Director-IIEC

CC: Dr. Jeanne Daboval, Provost and Vice President for Academic and Business Affairs
Dr. Musa Essayyad, Dean, College of Business
Mrs. Joyce Patterson, Director, Alumni Affairs
Item E.4. Northwestern State University’s request for approval of a Proposal for a Doctor of Education in Adult Learning and Leadership.

EXECUTIVE SUMMARY

Northwestern State University (NSU) requests approval of a proposal for a Doctor of Education (Ed.D.) in Adult Learning and Leadership. The Letter of Intent was approved by the Board of Supervisors for the University of Louisiana System in August 2015 with subsequent approval by the Board of Regents in March 2016. In accordance with Regents’ Academic Affairs Policy 2.05 the graduate-level program proposal was reviewed by an external consultant. Dr. Marcie Boucouvalas, Program Director and Professor of Adult Learning and Human Resource Development, Virginia Tech, stated the following in her report regarding the proposed program: “...it represents a meaningful resource to the discipline as well as to the University and the state since, while it serves Louisiana, it also has the potential to introduce Louisiana to colleagues beyond the border and thus place Louisiana, and NSU in particular, onto the radar screen of other states as well as countries.” Suggestions provided by Dr. Boucouvalas were incorporated into the Proposal resulting in a stronger program concept.

The intended Ed.D. is a practitioner degree program that will prepare individuals for the practice of adult learning and postsecondary leadership, specific to the community college setting. The proposed program will be attractive to those individuals who intend to pursue or advance their careers in the two areas noted. The 63 credit hour, cohort-based online program includes 21 credit hours of foundation courses in adult learning and organizational leadership, along with 12 credit hours in one of the two concentration areas: Community College Leadership (CCL) and Adult Learning and Workforce Development (ALWD). The curriculum also includes six credit hours of electives, a three credit hour practicum experience, and 21 credit hours of research methods and dissertation writing.

LA Workforce Commission projections indicate an additional 12,000 postsecondary completers are needed over the next ten years to meet the demand of new Tier One jobs, which are those in critical economic driver industries and which require community or technical college education. The emphasis on expanding postsecondary completion and workforce development opportunities will create the associated need for additional faculty and administrative resources, particularly at the community college level. Institutions are challenged to expand nontraditional learning opportunities and offer increased institutional flexibility to accommodate the life and learning needs of adult learners. This will require additional faculty and administrators with the capacity for creating and inspiring innovative institutional change and developing new instructional models and strategies in response.
Executive Summary E.4.
October 27, 2016
Page 2

There are several doctoral programs in Louisiana that provide advanced learning opportunities in educational leadership, curriculum and instruction, and administration; however, none focus on adult learning, workforce development, and community college leadership with a strong professional practice component and an emphasis on both instructional practice and leadership in postsecondary institutions. LA Tech, LSUS, Southeastern, UL Lafayette and ULM offer practice doctorates (Ed.D.) that address general and educational leadership, postsecondary administration, and policy development, and GSU’s Ed.D. focuses on postsecondary teaching in the context of success in developmental education. The basis for the Community College Leadership focal area lies within specialized studies into the unique complexities of two-year and community colleges, incorporating organizational and financial management strategies particular to those institutions. The Adult Learning & Workforce Development focus is unique in its attention to the needs and characteristics of adult learners and connections to developing a skilled and flexible workforce. With Louisiana’s 15 two-year institutions, many with multiple campuses, the anticipated degree should be relevant and well-received. Letters from entities such as the Louisiana Community and Technical College System (LCTCS) and Louisiana Economic Development (LED) indicate strong support for the proposed program.

NSU currently offers an MA in Adult Learning, as well as an MEd in Educational Leadership and Ed.S. in Educational Leadership & Instruction (with focus on K-12 leadership). All respondents to a survey of graduate students and staff for whom this program would be relevant to current or future career plans expressed an active interest in the degree concept. Thus, a strong student base will come from graduates of existing masters’ programs (e.g., the MA in Adult Learning & Development with a 3-year average of 12) and college and university staff or instructors seeking administrative leadership positions. NSU projects an initial enrollment of 20 students in Year One with the first graduates expected in Year Four.

The proposed Ed.D. will be part of the Gallaspy College of Education and Human Development and housed within the Department of Teaching, Leadership and Counseling. The program will be administered by the Coordinator of Adult Learning and Development and the Graduate Program Coordinator currently in place will provide oversight. NSU anticipates that, in addition to existing faculty, one additional doctorate-level faculty member will be required after the first year of program implementation. Projected tuition and fees should cover the costs of additional faculty resources and other minor expenses associated with implementation, and the University has also expressed a commitment to providing adequate funding to initiate and maintain the program.

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 Northwestern State University’s request for approval of a Doctor of Education in Adult Learning and Leadership (CIP Code 13.0403).
September 29, 2016

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

Re: Proposal: Doctor of Education in Adult Learning and Leadership (Ed.D), CIP 13.0403

Dear Dr. Reneau:

Northwestern State University is requesting the following item be placed on the agenda for approval at the October 2016 Board Meeting:

   Northwestern is seeking approval of the enclosed Proposal: Doctor of Education in Adult Learning and Leadership (Ed.D), CIP 13.0403.

Thank you for your consideration of this request.

Sincerely,

[Signature]

Dr. James B. Henderson
President

Enclosure
Louisiana Board of Regents

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: Northwestern State University of Louisiana
Requested CIP, Designation, Subject/Title:
CIP: 13.0403
Designation: Ed. D.
Title: Doctor of Education in Adult Learning and Leadership (Ed.D)

Contact Person & Contact Info
Dr. Bill Morrison, Associate Professor of Adult Learning: morrisonb@nsula.edu; 318-357-6144(o); 318-769-9876(c)

Date Letter of Intent was approved by Board of Regents: March 23, 2016
Date this Proposal was approved by Governing Board:
Planned Semester/Term & Year to Begin Offering Program: Fall/Spring 2016/17

1. Program Description
Describe the program concept: (a) purpose and objectives; (b) mode of delivery (on-site/hybrid/online). Describe plan for developing and rolling out new courses.

Program Purpose:

Northwestern State University Gallaspy College of Education and Human Development’s Adult Learning and Leadership Program will offer a Doctor of Education degree (Ed.D.) for students who intend to pursue or advance their careers at the highest levels of professional practice in the program concentration areas of Community College Leadership and Adult Learning and Workforce Development.

The Doctor of Education in Adult Learning and Leadership will be the only advanced degree program in Louisiana that focuses on the needs of developing community college leaders and preparing practitioners to work with adult learners and workforce development. Graduates will be qualified to assume advanced leadership roles in areas of workforce development, organizational leadership, community college administration and management and scholarship.

Program Objectives:

The Adult Learning and Leadership Program offers a Doctor of Education degree for students who intend to pursue or advance their careers in the professional practice of adult learning or post-secondary leadership at the community college level. The Doctor of Education is a practitioner degree program that prepares students for the practice of adult learning and leadership across the following domains: teaching and learning, curriculum and instructional design, workforce development, program management and planning, organizational change, and community college leadership.

Graduates from the Doctor of Education program will:

- Work as scholar-practitioners by applying current research and theory to real-world practice across a variety of settings
- Engage in critical thinking, analysis, and problem solving that reflect scholarly and professional intellectual standards, incorporate sound reasoning, and strive for equity
and fairness
- Understand the attributes and skills necessary to lead and manage professional organizations as complex and adaptive systems in a changing world
- Analyze and shape policies and programming that have implications for organizational and/or student success
- Engage in planning for transformative organizational change
- Consistently apply standards of ethical leadership and management
- Understand prevailing issues and problems of the organization and apply that knowledge within the organizational context
- Understand contextually relevant business models, program scalability and sustainability, funding, grants, and budgets
- Demonstrate leadership and management skills applicable to the administration of adult and lifelong learning and community college programs
- Demonstrate effective financial and human resource management reflecting current best practice and research
- Demonstrate essential skills in programming and evaluation, teaching strategies, curriculum development, group management, and distance education
- Engage in reflective practice for continuous professional growth and improvement
- Utilize multiple models, resources, and/or management strategies to engage and meet the needs of diverse populations
- Initiate and participate in communities of practice and other collaborations with professionals and community members to best meet individual and organizational needs
- Apply analysis and problem solving skills in order to evaluate the impact of programs or policies on individuals and organizations
- Design and conduct professionally relevant research, applying findings to make evidence-based decisions

Mode of Delivery

Coursework for the proposed Doctor of Education program will be offered primarily in an asynchronous online environment. Where appropriate, synchronous online learning will be employed allowing direct student-student and student-professor interaction. Offering online asynchronous education along with the beneficial support of a cohort model allows students who are currently employed to continue work in their current career while completing the doctoral program.

A benefit of the online environment is the ability to include synchronous experiences that feature outside guest speakers or lecturers from business, education, academia or related fields without limitation of geography. Providing content and information that represents the latest thinking, research, and practice in the field can enhance the student experience and quality of coursework in the program. NSU proposes to include guest lecturers who are leaders in their field and/or subject matter experts who can bring these elements to appropriate doctoral coursework and provide additional credibility and variety to course content.
Cohort Model

The proposed program of study will follow an open cohort model that allows new students to enter a cohort should there be an opening. For doctoral-level studies, cohort membership can have significant benefits. The cohort-based education model develops mutual understanding and intellectual stimulation, forms social ties, and enables institutions to organize programs in effective ways (Bista & Cox, 2014). Students work collaboratively and thoughtfully on projects, tasks, and assignments, therefore generating groups of students with shared goals. This cohort model, supported by faculty advisors, facilitates and supports student development through elements of the four pillars of the Drago-Severson model of leadership and development: teaming, providing leadership roles, collegial inquiry, and mentoring (Drago-Severson et al., 2013). According to Bista and Cox (2014), Lei and colleagues (2011) report that the familiarity among cohort members allows for a more authentic conversation about issues, concerns, and projects in the class compared to non-cohort members. They further report that the cohort’s shared culture promotes and enhances social, personal, professional, and educational outcomes, and encourages members to continue in the program. In an online environment, these attributes are particularly difficult to cultivate and the cohort model can help foster such a shared culture.

There are no other programs of this nature being offered in Louisiana and none in the surrounding states. If another institution offers a similar program, Northwestern State University would be willing to share resources.

Student Development and Academic Support

General Student Support

Student support in the doctoral program will come from university faculty and staff, peers and others in the wider community. Simultaneously, students will contribute to the development of themselves, their peers, the university and the wider community. Northwestern State University’s intention is to create conditions for growth through students’ learning and actions. At the doctoral level, this means an emphasis on fostering intrinsic motivation and on becoming increasingly more creative-critical thinkers, self-directed and reflective learners, and self-aware and collaborative people. A critical element is providing the impetus for students to think deeply, beyond and within themselves and to identify the challenges that are most pertinent to them and to others. With the support of their peers, faculty, and the university community (including the Student Academic Success Center), students will develop their own and others’ capabilities.

Support Strategies

Building Cohort Community

One of the primary strengths of the cohort model is its facilitation of building the cohort into a community of learners. Specific strategies to support building a feeling of community among the student cohort are:

- Incorporate a number of live personal interactions in each class, e.g., live office hours, phone calls, Web-ex sessions, live speaker for multiple classes simultaneously, etc.
• Provide a non-course-specific collaborative environment space for all doctoral students, regardless of cohort, to interact with and support each other and faculty on ideas, concerns, resources, challenges and other items of interest.
• Hold a minimum of one virtual, live “in-person” event a year for multiple cohorts. This can take the form of a WebEx symposium on key topics, giving students access to leaders in the field. Such cross-class/cross-cohort interactions build communities of professional development and provide learning on emerging topics.
• Create a student-run university-supported community of practice.
• Encourage and support student participation in their professional communities. For example, professors could encourage student participation in research or professional practice communities (e.g. AACC, AAACE, accompanying students to the conferences).
• Work with members of the business community and other learning institutions to address common issues (e.g., developing the workplace, increasing literacy, increasing sustainability).

Technology Support

As the proposed Doctor of Education program is fully online, student and faculty technology proficiency is critical to student and faculty success. The NSU program faculty and eNSU support staff will provide robust support for students and faculty around learning how to use all types of online technology tools and use technology aimed at providing increased support and community. Two suggested strategies are:

• Provide Get-to-Know your Technology sessions. These sessions will introduce students and program faculty to new technologies that are core to online coursework. Faculty and support staff will follow-up with students to provide support, track their technology use, provide interventions when needed, and evaluate overall student and faculty success. Lack of support is shown to be a primary reason students don’t take full advantage of the wealth of online resources and engage fully in the online learning (Zawacki-Richter, 2004).
• Introduce students to, and provide experience with Web-ex and other technologies for holding synchronous online meetings. Instructors will be required to incorporate synchronous, live meetings. Such online sessions are geared toward building community as well as knowledge.

New Course Development and Implementation

All courses for the proposed program are new courses. Courses will be developed by collaboration between Northwestern State University faculty and consultant scholars with national recognition in the field. All courses will be fully developed before the beginning of the semester of the course’s first offering. Course development is a continuous improvement process with content updated with each course offering.
Map out the proposed curriculum, in sequence, identifying any incremental credentials and/or concentrations within the degree. Indicate which courses will be new, including those that would be offered in the new program as electives. Describe any special requirements (e.g., internships, comprehensive exam, thesis, etc.).

Program Curriculum

The proposed Doctor of Education degree program is a comprehensive, 63 semester hour program that provides foundation courses in adult learning and organizational leadership, along with coursework targeting each of the two concentration areas: Community College Leadership and Adult Learning and Workforce Development. The foundation coursework is designed to provide the student with an integrated knowledge base of theory and current best practice within the fields of adult learning, organizational leadership, and instructional design.

While each of the two concentration areas of Community College Leadership and Adult Learning and Workforce Development provides focused, advanced studies in the field, cross-disciplinary coursework that is common to each concentration area has been incorporated whenever possible to maximize the use of resources. Within each of the concentration areas, students may pursue specialized areas of interest and study through elective courses and gain practical experience within their own organization or area of interest through an individualized practicum experience. Initially, the coursework for these specialization areas will come from current Northwestern State University graduate offerings.

Course of Study
(See Attachment #1 for Course Descriptions)
*New Courses

Foundation - 21 semester hours

- The Discipline of Adult Learning and Development *
- The Science and Theory of Adult Learning and Development *
- Understanding Organizational Leadership and Change*
- Diversity and Multicultural Perspectives in Adulthood*
- Instructional Design and Professional Development for Adult Learners*
- Grant Development and Project Management *
- Seminar in Law, Policy, and Issues *

Concentration – 12 semester hours

- Concentration in Community College Leadership (CCL)
  - Community College Organization and Administration*
  - Organizational Leadership in the Community College*
  - Financial and Human Resource Administration for Community Colleges*
  - Teaching, Learning, and Curriculum in Post-Secondary Education*

- Concentration in Adult Learning and Workforce Development (ALWD)
  - Workforce Development in a Global Economy*
  - Seminar in Adult Learning Environments*
  - Planning and Measuring Transformative Adult Learning Programs*
• Teaching Disadvantaged Adult Learners*

Electives and Support—6 semester hours**
• Related existing NSU Graduate Courses (Other doctoral concentrations, Educational Leadership, Educational Technology, Educational Psychology, Curriculum & Instruction, Student Affairs in Higher Education, research, statistics, etc.)
• Scholarly Writing for Research and Practice*

**Doctoral students may pursue an additional 18 graduate hours in an academic content-area in order to earn a post-bachelor’s certificate in a graduate discipline in order to meet SACS/CAEP requirements for teaching in a community college/university content area. The 18 hours in the discipline to be determined by the university.

Application—3 semester hours (Course content/practicum site will vary with concentration)
• Applied Principles of Adult Learning or Organizational Leadership*

Research & Analysis—12 semester hours
• Methods for Planning and Conducting Educational Research*
• Qualitative Research Methods for Educational Research*
• Quantitative and Statistical Methods for Educational Research*
• Doctoral Seminar: Planning for Practice and Research*

Dissertation—9 semester hours (minimum)*

Total Program—63 hours

Recommended Course Rotation and Schedule

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<td>Concentration #3*</td>
<td>Elective #1</td>
<td>Grant Development and Project Management*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Seminar in Law, Policy, and Issues *</td>
<td>Application*</td>
<td>Qualitative Research Methods for Educational Research*</td>
<td>18</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Methods for Planning and Conducting Educational</td>
<td>Quantitative and Statistical Methods for Educational Research*</td>
<td>Doctoral Seminar:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>Research *</td>
<td>Planning for Practice and Research*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
<td>-------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Dissertation (6 Hrs)*</td>
<td>Additional Dissertation as Needed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dissertation (3 hrs)*</td>
<td>9</td>
<td>63</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*New courses*

Special Requirements

Dissertation Process and Advising

Selection of the Major Advisor, Dissertation Advisory Committee Chair, and Dissertation Committee

Students will be assigned a major advisor during the first year of doctoral work. The major advisor will be selected from program faculty or administration and will also serve as the advisory/dissertation committee chair. A student advisory/dissertation committee comprised of the student’s major advisor and three additional faculty members will guide the student through the program, research, and processes outlined in this proposal. The three committee members will represent relevant disciplines to best support student research goals and interest and must be members of the NSU Graduate Faculty or be eligible for temporary membership as graduate faculty of NSU. When appropriate, and off-campus expert may be named as a fourth committee member. Given the online format of the proposed program, all meetings between the student and the major advisor or committee may be either face-to-face or virtual, based on the needs of the student. Students will have input in the selection of their committees, although final assignments will be determined by the program director.

“The dissertation process—that some doctoral candidates often describe as a lonely road—can be fortified by building in group advising and support” (Boucouvalas, 2016). To provide additional student support during the dissertation process, a support panel of selected program graduates will be formed who are willing to serve as informal support mentors for one or more students. This panel of program graduates will also serve as guest speakers in the class Doctoral Seminar: Planning for Research and Practice.

Dissertation Prospectus

During the course Doctoral Seminar: Planning for Research and Practice, the student will write a dissertation prospectus, which will be sent to the committee for approval. Approval of the prospectus is an iterative process where the student engages in dialogue with the committee to arrive at an acceptable document. It is proposed that the prospectus contain the rationale and purpose for the study, clear statement of topic, proposed research question, tentative outline and brief summary of the dissertation chapters, outline of the literature review, brief outline of proposed methodology, and a tentative schedule for research, writing, and completing the dissertation. The approved prospectus will function
as the guide for the development of the dissertation proposal and dissertation.

The NSU Doctor of Education dissertation proposes a dissertation format that allows the candidate to demonstrate the attributes of a scholarly practitioner through a structure that is closely aligned with their professional practice. The Doctor of Education student will complete a 5-chapter form of the Dissertation-in-Practice as developed by the member universities of the Carnegie Project on the Education Doctorate.

As previously indicated in this proposal, the proposed Doctor of Education degree is a professional practitioner degree intended for those who wish to pursue the highest levels of professional practice in their chosen careers. The Council of Graduate Schools (2007) differentiates the professional degree from the traditional research degree with, “Professional degree should represent preparation for the potential transformation of that field of professional practice just as the PhD represents preparation for the potential transformation of the basic knowledge of a discipline” (p. 19). The Carnegie Project on the Education Doctorate (2009) notes that the professional doctorate in education “prepares educators for the application of appropriate and specific practices, the generation of new knowledge, and for the stewardship of the profession.” The capstone project in the professional degree program should provide the student with the opportunity to demonstrate the ability to analyze and solve problems of practice, integrate practical and research knowledge and construct and apply knowledge to make a positive difference in the lives of individuals, organizations, and communities (Perry & Imig, 2010). The Dissertation in Practice provides the opportunity for the student to demonstrate these qualities as well as a number of program objectives, making the Dissertation in Practice an appropriate format for this program.

Dissertation Proposal and Defense

After the committee approves the prospectus and the student successfully completes the comprehensive examination, the student constructs a dissertation proposal under the direction of the committee chair. A minimum of 9 hours of dissertation coursework is required for graduation, and a student may not take more than six hours of dissertation coursework in any single semester. The proposal consists of the first three chapters of the dissertation and serves as the point of transition to writing the dissertation. When the committee chair approves the proposal, it is forwarded to the committee and the oral defense of the proposal is scheduled. In the oral defense, the student presents the proposal and the committee engages the student with questions and discussion, which result in specific recommendations to be implemented in the construction of the dissertation. Once the committee approves the proposal, the student advances to candidacy status.

Dissertation Writing and Defense

The dissertation is written under the primary guidance of the major advisor with input from committee members. The advisor and committee provide guidance on the dissertation structure, content, research and analysis methods, and set expectations for quality and timely completion. Once the committee chair and members feel the dissertation is substantially complete, the dissertation defense will be scheduled. The dissertation defense will commonly be an oral presentation of the dissertation by the student and discussion and questions by the committee members. However, the exact nature and format of the dissertation defense may vary with research topic and method and will be determined by
the committee chair. The committee will deliberate on the presentation and defense and issue a decision on the status of the dissertation. Possible results include: rejection of the dissertation, conditional approval with significant changes, approval pending recommended changes, or unqualified approval.

Preliminary and Comprehensive Examinations

In addition to the dissertation process and associated defenses, it is proposed that students will participate in both qualifying/preliminary and comprehensive examinations. The qualifying/preliminary examination will be given near the end of the student's second semester and will consist of both oral and written components. The nature of this examination is developmental and provides the student and committee the opportunity to reflect on program progress to date, propose the plan of study for the remainder of the program, and discusses potential research interests. The comprehensive examination also includes both written and oral components and will be completed near the end of the student's coursework and before the dissertation phase. The purpose of this examination is to determine the student's development to date and to assess the student's readiness for the final phases of the program.

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).

Statewide Need

Louisiana job growth forecasts are very robust over both the short and long-term with an estimated 103,000 new jobs in the next year and a steady need for 76,000 workers per year through 2022 (Louisiana Workforce Commission, 2015). The Louisiana Workforce Commission provides a star rating for jobs and those with the best long-term outlook and wages are awarded the highest rating of five stars. Of Louisiana's top 10 occupations requiring post-secondary vocational training, all are 5-star rated jobs with an average annual salary of nearly $40,000.

While this employment outlook for Louisiana is very positive, there is a large gap between the demand of the job market and the number of annual completers from workforce development programs, community and technical colleges, and four-year institutions. Projections indicate that over the next 10 years, 12,000 additional post-secondary completers will be needed each year in order to meet the demand of new Tier One jobs, which are those in critical economic driver industries and require community or technical college education. In addition to the 12,000 additional completers, an additional 2,000 graduates from four-year institutions will be needed to fill the demand for advanced Tier-One jobs. Predictions from the report, "Workforce 2020: Work & Workers in the 21st Century," indicate that 65% of available jobs will require advanced training or an associate's degree and 15% will require graduation from a four-year program.

In order to help meet this workforce gap, the Louisiana Community and Technical College System (LCTCS) has committed to a long-term plan, "Our Louisiana 2020: Building the Workforce of Tomorrow." This plan specifies the following outcomes related to this program:
Double the number of graduates from the LCTCS
Double the annual earnings of graduates to $1.5 billion
Quadruple student transfers to four-year universities to 10,000 annually
Double the number of students served to 325,000 annually

Additionally, The Louisiana Board of Regents (BOR) recognizes that, “with less than 30% of Louisiana’s adults holding a postsecondary credential, the existing workforce in Louisiana is ill prepared to work in a knowledge economy” (Louisiana Board of Regents Master Plan for Public Postsecondary Education, 2011). In order to meet this knowledge gap, the Board of Regents established the goal in its 2011 Master Plan of increasing the educational attainment of adults in Louisiana to the Southern Regional Education Board average by 2025. This goal specifies that 42% of Louisiana adults will attain some form of post-secondary credential, thereby increasing the overall quality of life in Louisiana.

This additional emphasis on expanding postsecondary completion and workforce development opportunities will create the associated need for additional faculty and administrative resources to educate the additional students indicated in these forecasts. The Northwestern State University Doctor of Education program specifically targets providing additional terminal degreed faculty and administrators functioning at the highest levels of their practice who can help Louisiana meet these goals.

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

Since 1884, Northwestern State University has been committed to serving the needs of Louisiana through quality academic programs, research, economic development and strategic partnerships. Northwestern State University and the Gallaspy College of Education and Human Development are formally committed to academic excellence, research, e-Learning, economic development, and strategic partnerships as evidenced in NSU’s University Vision:

- Northwestern will be responsive to changing views and trends as it works to provide a highly-qualified workforce to promote economic development and to meet the needs that higher education can provide to students, state government, private enterprise, and society.
- Northwestern State University strives for educational quality through excellence in teaching and research, innovative use of technology, and exceptional service to students and other constituencies.

Northwestern State University is uniquely qualified to provide this program in that Northwestern currently offers the only graduate program in Adult Learning and Development in Louisiana. This program was recently redesigned based on input from regional communities and economic development organizations, resulting in an increase in program enrollment of over 70%. By building on this graduate expertise, the Doctor of Education program will provide advanced experiences and qualifications for adult learning faculty, practitioners, and community college leaders.

Dr. Chris Maggio, Vice President for the Student Experience at Northwestern State University, commented on the need for and alignment of this program with state, university, and regional needs. “Having received my Doctor of Education degree in Developmental Education and
working closely with professionals at community colleges and in business and industry, I feel a doctoral program that develops and strengthens human potential in this dynamic field is vastly needed in our state and region. Community colleges, more and more, are the avenue that provides students access to quality educational programs and lifelong learning. Northwestern State University has its beginnings and remains a leader in teacher education. This program will fill a critical need in preparing professionals in rapidly growing two-year colleges systems."

The Doctor of Education in Adult Learning and Leadership is a practice-based program that aligns with the priorities of Northwestern State University and Louisiana’s academic and workforce development goals. In part, the mission of Northwestern State University is to "... prepare its students to become productive members of society and promote economic development and improvements in the quality of life of the citizens in its region." Graduates will be qualified to assume these faculty, industry, community college, and leadership roles, thereby contributing to the educational attainment of adults, economic development, and overall quality of life in Louisiana.

Additionally, by providing graduates who can fill the roles of adult learning faculty and community college leadership, this program supports, and is aligned with the goals of the Louisiana Board of Regents and the Louisiana Community and Technical College System (LCTCS). Both the Board of Regents and the Louisiana Community and Technical College system have set ambitious goals for workforce development and the educational attainment of adults in Louisiana over the next few years. Along with increased efficiencies, additional faculty and campus leadership will be required to accommodate this growth. Data provided by the Louisiana Community and Technical College System present growth forecasts that indicate significant need for community college leaders and a great need for community college teachers over the next five years. Estimates indicate that meeting these goals will require a total of nearly one thousand new faculty members and fifteen new community college administrators annually in the LCTCS system alone. These forecasts are summarized in the table in Attachment #2. Additionally, LCTCS President Dr. Monte Sullivan provided a letter of support noting that these growth forecasts are real and that the NSU Doctor of Education program will "provide more faculty and educational leaders needed to meet our state’s shortage." Dr. Sullivan also feels that "the doctoral program presented by Northwestern will only enhance our strategic initiative and generate additional opportunities for our colleges.” Please see his and other letters of support in Attachment #3.

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.

There are no similar programs offered at other institutions in Louisiana. Rather than duplicating other programs that center on administration and leadership of organizations, all concentrations of the proposed Doctor of Education program have a unique focus on community college leadership or the practice of teaching, learning, and leadership around adult learning. Distinctive elements of each concentration include leadership at the community or two-year college level and workforce development and instructional design and delivery to meet the specific needs of adult learners, many of whom are high-risk, non-traditional students who often are single parents, work full-time, and require developmental coursework.

There are numerous doctoral programs in Louisiana providing advanced learning opportunities
in educational leadership, curriculum and instruction, and administration. However, there are no programs in the state for those interested in advanced studies in adult learning, workforce development, and community college leadership with a strong professional practice component and an emphasis on both instructional practice and leadership.

Currently, the most common opportunity for doctoral studies in education in Louisiana is provided through educational leadership programs with various concentrations. Educational Leadership, regardless of nuanced concentrations, is at its core a K-12 leadership degree and thus it is difficult to provide a comprehensive study of adult learning, workforce development, or community college leadership within the educational leadership framework. The basis for the Community College Leadership concentration lies within specialized studies into areas of the unique complexities of community colleges and two-year institutions, applying principles of adult learning to working with at risk and non-traditional learners, rural education and economic development, budgeting and finance management strategies particular to community colleges and two-year institutions, and strategic industry partnerships, just to name a few.

Adult Learning and Workforce Development is not duplicated nor addressed in any current doctoral program in Louisiana. This program will provide the only doctoral program that connects adult learning in various settings with workforce development. Louisiana State University offers a workforce development component to its doctorate in Human Resource and Leadership development, but this component is attached to the development of human capital in organizations. The Northwestern program emphasizes instructional development and leadership in the diverse contexts within which adult learning occurs. Graduates from this program will be prepared to design, manage, conduct, and evaluate adult learning initiatives that affect transformational change in a variety of settings. Adult literacy, learning in the workplace, and workforce development through postsecondary education are becoming critical to meeting employers’ needs as domestic and international businesses place more emphasis on a well-educated workforce. This requires adult education professionals with advanced expertise in the unique needs, motivations, and characteristics of adult learners and their connection to a highly skilled workforce.

If approved, will the program result in the termination or phasing out of existing programs? (Is it a replacement?) Explain.

If this Doctor of Education program is approved, it will not result in the termination or phasing out of any other program. This program is not replacing or supplanting any other 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).

Challenges for Post Secondary Education

Both community colleges and universities face challenges in meeting the demand for a well-prepared workforce with advanced skills. In order to meet these goals, it is not sufficient for community colleges and other providers to simply enroll larger numbers of students into their programs. Over 40% of enrolling students require developmental courses, one-fourth are single parents, many work full time, and approximately 30% come from the lowest income level families. In its 2005 report, the Council for Adult and Experiential Learning (CAEL) noted that an estimated 73% of students in post-secondary, undergraduate education could be
characterized as non-traditional. These students face significant challenges to post-secondary success.

These factors challenge community colleges, universities, and workforce providers to expand non-traditional learning opportunities, offer increased institutional flexibility, increase numbers of faculty, provide advanced career education, and accommodate remedial education needs. This requires additional advanced degree faculty and administration with the capacity for leading innovative institutional change and developing new learning models and instructional strategies that can address the above-named challenges.

State and National Demand for Advanced Degree Faculty and Leadership

Northwestern State University has long been committed to being responsive to the changing needs in providing an educated and highly qualified workforce that can promote economic growth and quality of life in Louisiana. Currently, Northwestern State University offers the only graduate program in Adult Learning in Louisiana and there are no programs focusing on community college leadership in Louisiana. The current Master of Arts in Adult Learning and Development program targets the development of educators who can help meet the needs of workforce development and adult learners in Louisiana. However, only 6.9% of Louisiana adults hold an advanced degree, which is a national rank of 47th (U. S. Census, 2011). The shortage of those who have doctoral level credentials in Louisiana impacts the number of individuals qualified to engage in the professional practices of administering our community college and workforce development programs, developing faculty to increase the educational attainment of Louisiana’s adults, and increasing Louisiana’s overall capacity to meet the demand for more than 14,000 additional post-secondary completers per year to meet workforce projections.

As noted above, the Louisiana Board of Regents (BOR) recognizes that, “with less than 30% of Louisiana’s adults holding a postsecondary credential, the existing workforce in Louisiana is ill prepared to work in a knowledge economy” (Louisiana Board of Regents Master Plan for Public Postsecondary Education, 2011). By providing graduates that can fill the roles of adult learning faculty, community college leadership and adult educators, this program supports, and is aligned with these goals of the Louisiana Board of Regents.

Additionally, this program supports the Louisiana Community and Technical College System (LCTCS) master plan, Our Louisiana 2020: Building the Workforce of Tomorrow. Both the Board of Regents goal of increasing the educational attainment of the adult population to the SREB average of 42% by 2025 and the LCTCS goal of doubling the number of annual graduates by 2020 will require the acceleration of efforts and connections around education, research, and economic development (BOR, 2010). Along with increased efficiencies, additional faculty and campus leadership will be required to accommodate this growth. Estimates indicate that meeting these goals will require a total of nearly one-thousand new faculty members and fifteen new community college administrators annually.

According to the U. S. Department of Labor (2015), an additional 236,400 college faculty will be needed by 2022, which represents a growth rate of almost 20%. This national demand for college faculty, combined with the LCTCS and BOR educational and workforce goals of Louisiana demonstrate the need for a practice-based doctoral program to meet Louisiana’s growing need for those who can lead, teach, and innovate at the highest levels.
The Doctor of Education In Adult Learning and Leadership will be the only advanced degree program in Louisiana that focuses on the needs of developing community college administrators and leaders and preparing individuals to work with adult learners and workforce development. Graduates of the Adult Learning and Leadership program will be qualified to assume these faculty, industry, and leadership roles, thereby contributing to the educational attainment of adults, economic development, and overall quality of life in Louisiana.

Possibilities for Cooperative Programs

While no similar programs are currently offered, Northwestern State University is willing to cooperate with other institutions should similar or supporting programs be developed.

3. Students

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

Students for this program will come from various roles and organizations in adult learning and community college leadership. It is anticipated that the greatest interest in the Community College Leadership concentration will be from individuals seeking advanced faculty credentials or leadership positions within community colleges or four-year institutions.

Students for the Adult Learning and Workforce Development concentration are anticipated to be adult learning practitioners who come from, or wish to pursue, roles in a variety of contexts and environments in which adult learning occurs. Based on meetings with various stakeholders such as a community and healthcare foundation, economic development alliances, a community education foundation, university and community college staff and faculty, current and former students, and community service organizations, the following list represents potential sources for students:

- Community college faculty
- University personnel connected to student development or student success programs
- Corporate staff development personnel
- Community development organizations
- Economic development organizations
- Workforce development personnel in community colleges, government, or organizational settings
- Adult basic education and literacy organizations
- Healthcare training and development personnel
- Department of corrections personnel responsible for staff development or inmate literacy programs
- Military staff development or adult education personnel

Two surveys were administered to potential students in order to evaluate interest in the program. One survey was administered to NSU graduate students and the second was administered to Northwestern staff in offices such as student affairs, registrar, and recruiting. These surveys were administered during the summer and, while response rate was low, of the surveys administered, 14 students and 18 staff responded. The survey administered to Northwestern students and staff was divided into two categories: those for whom this program
would be relevant to their current or future career plans and those who indicated that it would not. Of the respondents, 64% of students and 72% of staff indicated that the degree would be relevant to their career path. Of this number, 100% (13) of staff and 100% (9) of students indicated that they would be interested in pursuing the Ed.D. degree. Of those for whom the degree is not relevant to their career, all indicated no interest. The results are summarized in the table below.

<table>
<thead>
<tr>
<th></th>
<th>Total Surveyed</th>
<th>Respondents</th>
<th>Relevant to Career</th>
<th>Indicated Positive Interest</th>
<th>Percentage With Interest and Relevancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSU Graduate Students</td>
<td>156</td>
<td>14</td>
<td>9</td>
<td>9</td>
<td>100%</td>
</tr>
<tr>
<td>NSU Staff</td>
<td>55</td>
<td>18</td>
<td>13</td>
<td>13</td>
<td>100%</td>
</tr>
</tbody>
</table>

Northwestern State University has also received many direct inquiries from various potential students about an online doctoral program. Informal conversations with several chancellors and deans with the LCTCS system indicate that the interest from LCTCS faculty and administrators in this program will be very high. It is likely that the demand for the Doctor of Education in Adult Learning and Leadership will exceed the 20 available positions for incoming graduate students each year.

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

Based on an analysis of these surveys and additional direct inquiries from the larger education community in Louisiana and other markets listed above, the estimated enrollments were calculated and are included in the table below.

Projected Enrollments

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5+</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Students</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Graduates</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

The potential students in the previous section are interested in advanced, doctoral level studies and none of these students would currently be attracted to Northwestern State University or come from existing programs, as NSU currently does not offer a doctoral degree, other than the Doctor of Nurse Practitioner (DNP). Additionally, intensive targeted marketing will be directed to individuals in the roles and organizations listed in the previous section. Recruiting efforts will employ various marketing strategies to attract high quality, qualified applicants from the local, state, national, and international levels.

To support the identification and recruitment of qualified candidates from diverse economic, racial, and cultural backgrounds, the Gallaspy Family College of Education and Human Development awards an endowed professorship that dedicates funds to these recruiting activities. Additionally, the NSU Foundation will offer a minimum of three scholarships for these students through the Gallaspy Scholarship Fund.
Provide enrollment/completer data for closely related programs currently offered at the institution.

**Master of Arts, Adult Education 20011-14 (Program Redesigned in 2014)**

<table>
<thead>
<tr>
<th>Degree Program / Degrees Granted</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Education</td>
<td>45/12</td>
<td>45/11</td>
<td>39/15</td>
<td>23/11</td>
</tr>
</tbody>
</table>

**Master of Arts, Adult Learning and Development (Redesign of Adult Education Program)**

<table>
<thead>
<tr>
<th>Degree Program / Degrees Granted</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Learning and Development</td>
<td>*35 - n/a</td>
</tr>
</tbody>
</table>

*Additional students accepted into the program will enroll in the Spring 2016 semester.*

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

**Admission Criteria**

The proposed Northwestern State University Doctor of Education degree program seeks to develop the knowledge and skills that will enable graduates to excel and innovate in their chosen field. To achieve this end, the program establishes a dynamic and collegial community of students, faculty and stakeholders who are passionate about learning, innovation, and effecting positive change. These admission criteria help ensure that students are able to maximize growth and realize their potential in their chosen field of work and study.

Entry into the Doctor of Education Program will be in accordance with Northwestern State University's Graduate School requirements and*:

- GRE or other approved professional examination score - No minimum score beyond that required by the NSU Graduate School. GRE Score will be used as one of the criteria for ranking applicants.
- Departmental application
- Resume or curriculum vitae
- Essay writing sample - Must be a research-based paper
- Statement of purpose – Student's reason for applying and preparation for the program; strengths and experiences that are relevant; and how the program can help the student realize expectations and goals.
- Three letters of recommendation - Must be from people who have supervised applicant in academic, employment, or other similar setting.

*All application materials must be electronically submitted to the Northwestern State University Graduate School through the University online application system.
Northwestern State University (NSU) desires to attract top students into the Doctor of Education program and offers a competitive graduate student support package to assist students in attending NSU. Graduate student financial support consists of graduate assistantships and adjunct teaching opportunities. A limited number of these opportunities are available to qualified doctoral students and are awarded on an annual basis. Pending a successful annual evaluation, the contract for the graduate assistant or adjunct instructor continues for the next year.

Graduate assistants are awarded a $12,000 annual stipend (fall and spring semesters) and adjunct instructors are paid according to their academic credentials (e.g., $1,800 to $2,000 per course). Out-of-state tuition is waived for the Doctor of Education program, and employees of the University of Louisiana System are eligible for tuition reduction assistance.

Additionally, doctoral students will have access to the same graduate student grants and loans as other graduate students at Northwestern State University. Many students receive financial support for higher education from their respective organizations, financial lending institutions, and the Department of Education. Needs-based SEOB, Go Grants, work-study and other grants and Federal aid may be applied to provide financial support. Loans such as the Federal Grad Plus loan may also be applied.

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

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Degrees</th>
<th>Certifications/Licensure</th>
<th>Current Faculty Assignments</th>
<th>Credit Hrs/Contact Hours/Student Credit Hours Produced</th>
<th>Additional Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Bill Morrison</td>
<td>1983: BA NSU 1997: M.Ed.</td>
<td>Louisiana Secondary Business Teacher Certification</td>
<td>Coordinator of Adult Learning and Development Graduate Program Courses: Graduate Adult Learning and Development and Educational Technology</td>
<td>Credit Hrs: 15 Contact Hrs: 15 SCH's: 195.00 Expected: Credit Hrs: 15 Contact Hrs: 15 SCH's: 160-240</td>
<td>Graduate program recruiting, marketing. Department of Teaching, Leadership, and Counseling accreditation committee for CAEP Advanced Standards</td>
</tr>
<tr>
<td>Rank: Associate Professor</td>
<td>Educational Technology NSU 2000: Ed.D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joined NSU: 2014</td>
<td>Educational Technology Leadership. NSU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Dan Seymour</td>
<td>1972: BA NSU 1978: M.A. College</td>
<td>Licensed Professional</td>
<td>Associate Professor in</td>
<td>Credit Hrs: 12 Contact Hrs:</td>
<td>n/a</td>
</tr>
</tbody>
</table>

LA BoR – Program Proposal 17
<table>
<thead>
<tr>
<th>Rank: Associate Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joined NSU: 1996 (Most recent)</td>
</tr>
<tr>
<td>Student Personnel, Counseling NSU</td>
</tr>
<tr>
<td>1989: Ph.D Higher Education and Student Affairs</td>
</tr>
<tr>
<td>University of Mississippi</td>
</tr>
<tr>
<td>Mental Health Counselor</td>
</tr>
<tr>
<td>Marriage and Family Therapist</td>
</tr>
<tr>
<td>Certified Divorce/Child Custody Mediator</td>
</tr>
<tr>
<td>Certificed Mediator: Association of Student Judicial Affairs</td>
</tr>
<tr>
<td>Student Affairs and Higher Education and Mental Health Counseling</td>
</tr>
<tr>
<td>Courses: Graduate Student Affairs in Higher Education and Clinical Mental Health Counseling</td>
</tr>
<tr>
<td>12 SCH's: 156.00 (est) Expected in Ed.D.: Credit Hrs: 12 Contact Hrs: 12 SCH's: 150-240</td>
</tr>
<tr>
<td>Dr. Steven Horton</td>
</tr>
<tr>
<td>Rank: Professor of Education</td>
</tr>
<tr>
<td>Joined NSU: 1989</td>
</tr>
<tr>
<td>1988: BA NSU</td>
</tr>
<tr>
<td>1990: M.A. Journalism/Mass Communications, LSU</td>
</tr>
<tr>
<td>1998: Ph.D Vocational Education, Adult and Extension Education, Louisiana State University</td>
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<tr>
<td>Louisiana Teacher Certification in Journalism, English, Business Education, Computer Literacy, Computer Science, Vocational Education, Adult Education, and Supervisor of Student Teaching</td>
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<tr>
<td>Vice Provost Dean, Graduate School Dean, College of Arts and Sciences</td>
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<tr>
<td>Dr. James Henderson</td>
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<tr>
<td>Rank: Professor of Communication</td>
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<tr>
<td>Joined NSU: 2015</td>
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<tr>
<td>1994: BA NSU</td>
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<tr>
<td>2006: M.S. Administration and Human Performance, University of West Florida</td>
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<td>2012: Ph.D Management, University of Maryland University College</td>
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<td>Expected: Teaching in Adult Learning and</td>
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2+) leadership, or related field

adult learning or community college leadership.

Leadership Doctoral program, advising doctoral students, direct dissertations, student research, projects, and practicum experiences.

Contact Hrs: 15
SCH's: 160-240

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.

For each year of the program, annual enrollment will be limited to one cohort of a maximum of 20 students. The program course rotation is designed for a single annual offering of each new course. Therefore for the first year, a maximum of four new courses in the foundation or concentration will be offered and existing faculty can teach these classes. After the first year (Year 2+), the course load will increase to six & eight additional courses in the foundation and concentrations per semester and the program will require the addition of one new full-time faculty member. Afterward, the one new faculty FTE, along with current terminal degree FTE and other faculty will be sufficient for this course load.

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.

**Involvement of Current and Future Faculty**

Northwestern's Gallaspy College of Education and Human Development has created a culture that encourages research and service among program faculty. Currently, graduate program faculty work collaboratively on research projects with graduate students each semester. Additionally, faculty promotion and tenure policies are based in part on involvement in research and community service activities. Every faculty member, tenured and or tenured track, by contract is required to publish, conduct research, and seek out opportunities for scholarly and community involvement. In addition, faculty members submit their goals and objectives each academic year to the department head describing their plan of action in these specific areas. Faculty also support a host of University administrative operations through their participation on or chairing of committees and subcommittees.

Without causing an impact on the current teaching requirements, our faculty remain woven into the fabric of our community by supporting community outreach efforts through various service and community endeavors.

**New Faculty Qualifications**

Any new faculty will hold an earned terminal degree with a desired subject matter expertise and practice background in adult learning and development or community college leadership. Additionally, knowledge of research, statistics, organizational leadership and/or curriculum and instruction are desired.
Northwestern State University’s library holdings in the field are sufficient to initiate this program. For many years, the library has been moving toward a virtual environment and has in place a number of features that enhance distance education (such as online and/or Internet) programs. The library provides access to the following educational and educational related databases: Educational Administration Abstracts, ERIC, the Education Resource Information Center, Mental Measurements Yearbook, Professional Development Collection, and Teacher Reference Center. Related databases include Book Collection: Nonfiction, Family Studies Abstracts, MAS Ultra-School Edition, Primary Search (elementary school), Psychology and Behavioral Sciences Collection, PsycInfo, and SocIndex.

All of these databases are accessible through the Internet with student or faculty accounts. The library’s current collection is diverse and includes titles from a number of related fields. In total, the library has access to 111 databases.

Other resources available to the program include the library collection, which includes 7311 circulating titles, 116 titles, 3723 ebooks, and 46 Audio-Visual items. Other resources include Ambrose Digital Video, Credo Literati with 20 education reference titles, and Gale Virtual Reference Library, which includes the College Blue Book, Psychology of Classroom Learning, Scholarships, Fellowships, and Loans, and World Education Encyclopedia.

Northwestern State University has access to 1,191 educational journals online and 150 print journals.

Northwestern libraries participate in the nationwide OCLC Interlibrary Loan program. In addition, academic institutions in the state participate in the LOUIS consortium. Borrowing privileges, joint purchasing of full-text and other bibliographic databases, and cooperative resource planning and sharing are part of the consortium’s activities. Louisiana State University Health Science Center Library in Shreveport has library resources available for Northwestern faculty and students to access. Students and faculty also have access to DOCLINE, an interlibrary loan system between health science libraries. Both of these interlibrary loan systems are free of charge to faculty and students.

Indicate/estimate total expenditure for the last two fiscal years in library acquisitions for fields or departments offering or related to the proposed program.

Watson Libraries have spent $846,47 on acquisitions in the field of Education and Leadership during the past two fiscal years. This figure represents print resources only and does not include the majority of subject-area resources, which are electronic resources: the purchase price of which is consolidated with other databases and resources purchased by the library.

Project library expenditures needed for the first 5 years of the program.

The present print and electronic holdings in the Watson Library provide rich resources for students related to education and administration. Since the proposed program offers functional role concentrations in adult learning/workforce development, and community college
leadership, the reference and library resource needs for this program will be similar to those of the existing graduate programs. In order to support these current high-quality graduate programs, the Northwestern State University libraries have been continually updated, especially in electronic holdings and access to journals, research, and other materials, including resources in fields directly related to the proposed program. It is expected that the current process and rate of updating and adding to these resources will provide more than adequate library resources for the proposed Doctor of Education program. Given that these current standards of excellence will continue, the resources to support the proposed program are more than adequate.

As Watson Library has excellent holdings related to education and administration, it is projected that no additional funds will be needed for it. If the current library budget is maintained, adequate resources are anticipated to remain available for students of the proposed program.

What additional special resources, other than library holdings, will be needed?

The only additional resource that will be necessary for the proposed program will be statistical analysis software to be used for research that is conducted by students and faculty. The university purchased the network version of Statistical Package for Social Sciences (SPSS) for quantitative analysis, and will offer student licenses of NVivo and Ethnograph software for qualitative and unstructured data analysis. The addition of these statistical programs will be an important component of the Doctor of Education program.

6. Facilities and Equipment
Describe existing facilities (classrooms, labs, offices, etc) available for the program. Describe present utilization of these facilities that are assigned to the sponsoring department.

Existing Facilities Available for Program

This program will be within the Gallaspy College of Education and Human Development, which is housed in the Teacher Education Center (TEC) on Northwestern’s main campus in Natchitoches. The TEC provides space for instruction, offices, conferences and computer laboratories. All administrative and faculty offices are located in the two-story multi-pod building. This building is designed to contain all offices locations for secretarial space, workrooms, file rooms, computer laboratories, and lavatories. Administrative offices are located on the first floor and faculty offices are located on the first and second floors. All classroom and computer laboratories are located on the first floor.

As indicated in Part 1 of this proposal, coursework for the proposed program will be offered in an online environment. Northwestern State University is a pioneer in online graduate instruction and has successfully delivered online instruction for over 15 years. Northwestern’s commitment to both e-Learning and distance education is evidenced in NSU’s University Vision:

- Northwestern State University strives for educational quality through excellence in teaching and research, innovative use of technology, and exceptional service to students and other constituencies.
- Electronic learning and distance education will be an integral part of
Northwestern’s role in delivering degree programs and effective services on campus and throughout Louisiana, the nation, and the world.

All internet-based courses are offered through the Moodle course management system. A fully staffed information technology department maintains this system and operates the university’s data center. An online student help desk is available for all Moodle questions as well as electronic learning issues. In order to accommodate students who complete coursework after hours and need assistance, the student help desk is open nightly until 9:30 for live support and 24 hours/day for online support.

Northwestern is uniquely qualified to serve students through the online environment. NSU has developed an extensive distance-learning program that currently serves local, state, national, and international students. The University offers 36 fully/partly online-degree programs, from the associate to the doctorate degree. Approximately 500 course sections are available every semester, with an enrollment of approximately 6,000 students who take at least one online course. The University has been successful in the development of quality, academic online degree programs that are accessible 24/7, making them a viable alternative for place-bound students.

Present Utilization of Facilities

All program faculty members have private offices and there are currently sufficient office vacancies to accommodate any new program faculty. Each office is equipped with a computer with Internet access and loaded with a variety of programs, such as the current Microsoft Office and Windows. Any new faculty will be provided with office space and necessary equipment and furniture. All faculty members have access to a secure file server that is accessible from any university computer on any campus or via the Internet. This file server permits the faculty to access files and databases and to share files at any time. The server is backed up on a daily basis to ensure the integrity of the system.

Other Northwestern campuses are available to offer support to the program should students proximity to those locations need direct access to NSU facilities.

- The Alexandria campus has two computer laboratories with over fifty computers available for student use. All laboratory computers have Microsoft Office, Windows, and Internet access. In addition, access to electronic library services and student services such as registration, transcript request and resignation/drop forms are available online.
- The Nursing Education Center in Shreveport, which is a multi-building complex housing offices, instructional space, computer laboratories, and the College of Nursing and Allied Health Library.
- The Leesville/Fort Polk campus is a multi-building facility with instructional space, computer laboratories, compressed video services, and a student library.
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.

The Doctor of Education program will be an online program where travel to any campus is totally at the discretion and need of the individual student. Online students will have access to the comprehensive resources Northwestern has available to current online students. Northwestern has been a leader in distance education and has built a wealth of online student support services that students are able to access from wherever they may reside. Due to the excellent online support network and physical facilities, no additional requests for new facilities are anticipated for the proposed program. Space within the Gallaspy College of Education and Human Development is currently available for faculty office space and is expected to meet the needs of the proposed program.

7. Administration
In what department, division, school, college, or center/institute will the proposed program be administered? How will the new program affect the present administrative structure of the institution?

The new Doctor of Education program will be a part of the Gallaspy College of Education and Human Development and housed within the Department of Teaching, Leadership and Counseling. The program will be administered by the Coordinator of Adult Learning and Development, who will be responsible to the Department Head for the Department of Teaching, Leadership, and Counseling (TLC). The TLC Department Head reports directly to the Dean of the Gallaspy College of Education and Human Development.

The proposed program will not affect the present administrative structure of the University. A Graduate Program Coordinator is currently in place and will oversee the Doctor of Education program, once it is approved.

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

The Northwestern State University graduate education programs have a strong curriculum and faculty who are leaders in their respective fields. Faculty have varied academic and professional experience that brings a rich diversity of skills and experience to the program. They have held academic and administrative positions at various levels within universities and post-secondary institutions and at the state, regional, and district levels in educational administration. Faculty also serve on national boards, councils, and teams, a service that provides national leadership in the field and keeps Northwestern informed of the latest research, trends, issues, and practices.

Faculty also maintain competency by attending educational conferences, participating in professional activities at the state and national levels, and maintaining active faculty practice. All of the program faculty have presented professional sessions at the local or state level and several have presented at the national and international levels, most recently at the International Conference on Information Communication Technologies in Education 2014, Kos, Greece and the American Association of Adult and Continuing Educators 2014/2015, Charleston, SC. The expertise of the faculty is one of the greatest assets of Northwestern’s graduate education programs.
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.

The program will be eligible to be accredited through the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). Requirements for accreditation are identified in Principles of Accreditation: Foundations for Quality Enhancement, 2012 edition. The SACSCOC principles can be found at http://www.sacscoc.org/pdf/2012PrinciplesOfAccreditation.pdf.

This rigorous accreditation process will ensure that the proposed Doctor of Education program meets the standards of quality established by the higher education community. It signifies that the program meets the requirements to demonstrate a continuing effort to enhance the quality of student learning and the quality of the program. The accreditation also indicates Northwestern State University’s commitment to a continuous effort, “to enhancing the quality of programs and services…to create an environment in which teaching, public service, research, and learning occur” (SACSCOC, 2012).

The only additional costs incurred by the accreditation of the Doctor of Education Program are the expenses related to a site visit by a SACSCOC accreditation team. Historically, site visit expenses are approximately $3,300, which may be absorbed in existing site visit expenses. Because the university offers the Doctor of Nurse Practitioner in the College of Nursing and Allied Health, Northwestern State University is already a level 5 SACS University. Therefore there will be no additional accreditation costs associated with adding a doctoral program. The accreditation process will begin immediately upon initiation of the program, and it is projected that the SACSCOC program accreditation process will take approximately two years from the program start date, with accreditation candidacy being granted in 2019.

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.

At this point, consultants have been informal and include an adult learning and development professor from an out-of-state university and the deans of the Graduate School and of the Gallaspy College of Education and Human Development. Additionally, various outside stakeholders from the Louisiana Community and Technical College System, economic development alliances, and educational foundations were consulted in the development of this program. With approval of this proposal, further consultants will be utilized as needed.

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

Within the concentration areas, students may pursue specialized areas of interest and study through elective courses. Northwestern State University has strong graduate programs within the Gallaspy College of Education and Human Development and supporting coursework may be taken in Educational Leadership, Educational Technology, Education Psychology, Clinical Psychology, Curriculum and Instruction, Student Affairs and Higher Education, research, and statistics.
Two current Northwestern State University graduate programs are directly connected to the proposed doctoral program: Master of Arts in Student Affairs in Higher Education (SAHE) and Master of Arts in Adult Learning and Development (ALD). The SAHE program prepares university administrators, college student affairs administrator and other professionals in higher education. This practice-based program focuses on the role of student affairs in higher education, but contains general coursework on the history of higher education, legal and ethical issues, and working with diverse student populations. Among the approved electives for the SAHE program are courses from the Adult Learning and Development master’s program, providing an additional connection to the proposed program. Student Affairs in Higher Education students will have academic experience in higher education and many will have coursework from the Adult Learning and Development program, making graduates from this program well prepared to transition into the Community College Leadership concentration of the proposed program.

The Master of Arts degree in Adult Learning and Development provides direct preparation for students who wish to pursue doctoral work in either Community College Leadership or Adult and Workforce Development. The ALD master’s program is practitioner-oriented and provides students with a foundation of adult learning and development, designing and implementing adult learning programs, and understanding organizational leadership and learning. The core of the proposed doctoral program emphasizes all three of these themes and graduates from the ALD program will have excellent preparation for a success in the proposed doctoral studies.

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?

Additional Cost and Support Summary

Currently, the NSU Adult Learning and Development master’s program graduate faculty consist of one terminal degree full time faculty member, two masters-level adjunct faculty and one terminal degree NSU dean serving as part-time faculty and graduate advisor. Given the estimated enrollment in the Doctor of Education program, it is anticipated that, in addition to the current Adult Learning and Development full-time, terminal degree graduate faculty, one additional doctorate-level faculty member will be required after the first year. As this program includes concentrations in Adult Learning and Workforce Development and Community College Leadership, faculty from the existing College of Education and Human Development (COEHD) Student Affairs in Higher Education and Adult Learning and Development graduate programs will teach within their respective concentrations. New faculty salaries are based on a 9-month salary of $63,000 plus a benefit rate of 32% ($20,160) of salary. The initial expenses will be absorbed from current sources of revenue until the first cohort of students is admitted, at which point the program will be self-supporting. University and College of Education support personnel will be utilized to provide the minimal support required by this program and will not result in additional expenditure or in-kind expense. Additional costs relating to accreditation are outlined above in Section 8: Accreditation.

Equipment costs for new faculty members is anticipated at $2,500 per year for year two only.
Ongoing supply costs are estimated at $1,500 annually.

No additional funds will be needed for research to support the proposed program. The Gallsapy College of Education and Human Development currently has eight endowed professorships, which are awarded yearly to faculty for support of research and scholarly activities.

**Impact on Allocation of Departmental Funds**

The initial expenses will be absorbed from current sources of revenue until the first cohort of students is admitted, at which point the program will be self-supporting. University and Gallsapy College of Education and Human Development support personnel will be utilized to provide the minimal support required by this program and will not result in additional expenditure or in-kind expense.

*On the separate budget form, estimate new costs and revenues for the projected program for the first four years, indicating need for additional appropriations or investment by the institution.*

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.

Based on projected enrollments for the Doctor of Education program, it is anticipated that there will be a positive revenue stream from student tuition and fees and no additional sources of outside revenue will be required for support. As these students will be enrolling in Northwestern specifically for this program and would not otherwise attend the university, this amount represents new income for the university.

The University is committed to providing adequate funding from appropriate sources to initiate and maintain the program. In order to maximize resource benefits and meet the funding needs of the program, the Gallsapy College of Education and Human Development will ensure that faculty and resource allocation and program offerings are designed in the most efficient and cost effective manner possible.

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**CERTIFICATIONS:**

[Signature]
Primary Administrator for Proposed Program

[Signature]
Provost/Chief Academic Officer

[Signature]
Management Board/System Office

9/30/16
Date

9/30/16
Date

9/30/16
Date
**SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR PROPOSED PROGRAM**

Institution: _____Northwestern State University_______  Date: ____4-2016___________

Degree Program, Unit: _____Doctor of Education in Adult Learning and Leadership___________

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

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* Describe/explain expected sources of funds in proposal text.
Foundation - 21 hours

1. The Discipline of Adult Learning and Development
   a. An in-depth review of the organization and structure of adult learning systems in both formal and informal settings. The foundational emphasis is on the global adult learning and development movement, concepts, purposes and practices of the discipline.

2. The Science and Theory of Adult Learning and Development
   a. A systematic inquiry into emerging paradigms for adult education and the educational, theoretical, cultural, and philosophical foundations of adult learning.

3. Understanding Organizational Leadership and Change
   a. Leadership perspectives on organizational change and the transformative relationships between adult learning and the values, structures, and processes of organizational systems. Emphasis is on community college and adult learning organizations.

4. Diversity and Multicultural Perspectives in Adulthood
   a. A study of social, cultural, economic, and cognitive conditions that influence learning in adulthood, including local, national, and international perspectives.

5. Instructional Design and Professional Development for Adult Learners
   a. Structured exploration of instructional design models and principles and how they relate to the design, delivery, and measurement of adult learning activities, including professional development of the individual in the workplace.

6. Grant Development and Project Management
   a. This course presents solutions for meeting organizational funding and sustainability challenges through development, implementation, and management of grants. Also included are strategies for leading and directing projects and teams to achieve strategic and organizational results with a focus on adult learning and community college settings.

7. Seminar in Law, Policy, and Issues
   o An introduction to the discipline of public policy analysis and an overview of the law, policy, and issues impacting the selected field of study. Included are perspectives around compliance and organizational accreditation by relevant accrediting bodies.

Concentration – 12 hours

Concentration in Community College Leadership (CCL)

1. Community College Organization and Administration
   o An examination of organizational and administrative structures and processes of the community college and meeting the unique complexities and challenges of community colleges and two-year institutions.

2. Organizational Leadership in the Community College
   o Understanding the practice and role of leadership in the community college and relevant models for achieving organizational goals and improving outcomes with a focus on leadership as a process and core leadership competencies to achieve strategic organizational change.

3. Financial and Human Resource Administration for Community Colleges
   o Budgeting, financial, and human resource management strategies for public community and two-year colleges. Emphasis is on compliance issues, developing human capital, and enhancing service delivery in climates of budgetary challenges.

4. Teaching, Learning, and Curriculum in Post-Secondary Education
   o Leadership perspectives on the scholarship of teaching and learning, curriculum design and the barriers to student success in post-secondary education. The course examines the challenges of non-traditional students, developmental learning, transition to four-year universities, and provision of successful workforce development programs.

LA BoR – AA 2.05 - Oct 2015
Concentration in Adult Learning and Workforce Development

1. Workforce Development in a Global Economy
   a. This course examines the characteristics of the contemporary global worker along with current and future trends in the global workforce market and connects to planning, designing, and implementing effective workforce development programs with consideration of market needs, external relationships and context, and analysis of outcomes.

2. Seminar in Adult Learning Environments
   a. A consideration of the spectrum of adult learning environments and opportunities, including structured institutional and unstructured informal settings where learning occurs with implications for the design of educational programs and activities.

3. Planning and Measuring Transformative Adult Learning Programs
   a. Study of organization-level models and principles for designing, conducting, and measuring outcomes of adult learning programs in various workplace, educational, and community settings where adult learning is promoted. Emphasis is on programs that target contemporary adult learning and workforce development needs for transforming individual capabilities, beliefs, perceptions, and expectations.

4. Teaching Disadvantaged Adult Learners
   a. This course examines the educational, social, cultural, economic, and cognitive conditions that create barriers to adult learner success and presents instructional and learning strategies that can mitigate their impact.

Electives and Support – 6 hours

1. Three semesters hours chosen from related existing NSU Graduate Courses (Other doctoral concentrations, Educational Leadership, Educational Technology, Educational Psychology, Curriculum & Instruction, Student Affairs in Higher Education, nursing, health, research, etc.)

2. Scholarly Writing for Research and Practice
   b. Knowledge and skills to write effectively in a variety of academic contexts. Included are effective criteria and techniques for improving scholarly writing and practice.

Application – 3 hours (Course content/practicum site will vary with concentration)

1. Applied Principles of Adult Learning or Organizational Leadership
   c. Structured exploration of the application of the principals of adult learning and/or organizational leadership through an individualized practicum experience in a setting appropriate for the selected field of study.

Research & Analysis – 12 hours

1. Methods for Planning and Conducting Educational Research
   d. A systematic look at the design, methods, interpretation, ethics, and challenges of educational research, with emphasis on research skills and research as a way of thinking.

2. Qualitative Research Methods for Educational Research
   e. Methods and design of education research using qualitative methods. Emphasis on selecting methods, collecting and analyzing qualitative data, and ethical issues particular to qualitative research.

3. Quantitative and Statistical Methods for Educational Research
   f. Research methods, data collection, statistical techniques, interpretation of results, and evaluation of quantitative educational research.

4. Doctoral Seminar: Planning for Practice and Research
   g. Planning specific methods, approaches, and processes for educational research and evidence-based decision-making leading to development of the doctoral dissertation proposal.

Dissertation – Minimum of 9 hours

Total Program Hours: 63 hours
### LCTCS Estimated Annual Administrator Demand

<table>
<thead>
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<th></th>
<th>Total Chancellors / Administrators</th>
<th>Total Turnover (2000-2015)</th>
<th>Annual Turnover</th>
<th>% Total Annual Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chancellor demand (actual)</td>
<td>13</td>
<td>41</td>
<td>2.56</td>
<td>19.71%</td>
</tr>
<tr>
<td><em>Estimate</em> of 10 positions per Community College 13 CCs @ 10 each</td>
<td></td>
<td></td>
<td></td>
<td>(Actual)</td>
</tr>
<tr>
<td>Administrator Demand (estimate)</td>
<td>130</td>
<td>205</td>
<td>12.81</td>
<td>9.86%</td>
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<tr>
<td>Total average administrator/chancellor annual demand (estimate)</td>
<td></td>
<td></td>
<td></td>
<td>15.375</td>
</tr>
</tbody>
</table>

### LCTCS Estimated 5-Year Faculty Demand

<table>
<thead>
<tr>
<th></th>
<th>Student Count</th>
<th>Faculty FTE (Including Adjunct)</th>
<th>Student-FTE Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current (actual)</td>
<td>111,320</td>
<td>1,750</td>
<td>63.61</td>
</tr>
<tr>
<td>2020 (estimate)</td>
<td>222,640</td>
<td>2,800</td>
<td>79.51</td>
</tr>
<tr>
<td>New Faculty Required</td>
<td></td>
<td>1,050</td>
<td>Estimate based on 25% increase in student-teacher ratio</td>
</tr>
</tbody>
</table>
Attachment #3
Letters of Support
August 7, 2015

To: Dr. Jim Henderson, President
    Northwestern State University

Through: Dr. Monty Sullivan, President
         Louisiana Community and Technical College System

From: Dr. Daniel Roberts, Vice President of Academics and Student Affairs
      Louisiana Community and Technical College System

Re: LCTCS Support for Northwestern’s Doctor of Education in Adult Learning and Leadership LOI

The Louisiana Community and Technical College System (LCTCS) has reviewed the LOI for Northwestern State University’s LOI for a Doctor of Education in Adult Learning and Leadership program, and our system and colleges are in full support of this program.

The focus and outcomes of this program will serve students and industry in Louisiana. We feel that this program provides professional development opportunities for our college faculty and staff, and in turn, it will assist with providing better opportunities for our students and strengthen our relationships with industry. LCTCS has set strategic goals through the Our Louisiana 2020 Plan that will aspire our colleges to achieve new levels of success in our state. The doctoral program presented by Northwestern will only enhance our strategic initiative and generate additional opportunities for our colleges.

The growth forecasts presented in the LOI are real and must be addressed in our state. This program will provide more faculty and educational leaders needed to meet our state’s shortage. The distance learning aspect of this program provides sustainability as many potential graduate students have full-time jobs and are not living close enough to commute to Northwestern. Many of current faculty and staff have to go out of state for doctoral programs with an emphasis in community college leadership, and this program will help us to retain talent in our state.

LCTCS supports and is committed to participating with Northwestern’s Doctor of Education in Adult Learning and Leadership program. Please let us know if any additional information is needed for support of this program.
Board of Regents of Louisiana
1201 N. Third St., Suite 6-200
Baton Rouge, LA 70802

Dear Members,
Board of Regents of Louisiana

As Director of Workforce Initiatives at LED FastStart, the workforce development division of Louisiana Economic Development, it gives me great pleasure to write this letter of support for the proposed Doctor of Education in Adult Learning and Leadership at Northwestern State University. I believe the program will be an important contributor to the economic competitiveness of the region due to increasing demand for education and training at community and technical colleges. As these institutions expand, the need for qualified instructors and administrators will be met partially through programs like the proposed EDAL. The graduates produced by these new educators will provide a ready pool of workers for the types of high-wage, high-demand fields that spur growth in the economy and build personal wealth for citizens.

It is my belief that the students, community, and the region will benefit from program like this. I therefore strongly express my support for the approval of the proposed EDAL program.

Sincerely,

[Signature]

Susana Schowen
Director of Workforce Initiatives
LED FastStart
Louisiana Economic Development
225-342-5729
January 12, 2016

Board of Regents of Louisiana
1201 N. Third St., Suite 6-200
Baton Rouge, LA 70802

Dear Board Members,

Central Louisiana Economic Development Alliance (CLEDA) is pleased to provide this letter of support on behalf of Northwestern State University's proposal to offer a Doctor of Adult Learning and Leadership program. As the regional economic development organization for ten (10) parishes in Central Louisiana, we recognize the unique challenges faced by employers in developing skilled professional managers, educators and administrators at the highest level.

There are many enterprises in our region that can now benefit from this doctoral program. In particular, as a result of recent expansions and growth in our manufacturing sector, many companies now need additional training for corporate staff development. And there are more expansions on the drawing boards. This new doctoral program will help supply professionals who have the expertise to help these companies compete and thrive in the global market place.

In addition, our community development and economic development organizations are in need of this program. When finally offered, we expect it to be actively used by the workforce development personnel in our multi-campus community college and other public and private educational providers in the region. The program will also be valuable for the well being of our citizens, because it will be used in healthcare training and organizational development. This program for a Doctor of Adult Learning and Leadership will significantly contribute to the advanced practice in workforce development, community college administration and business and industry leadership, thus enhancing our regional economic development success.

We appreciate your continued efforts to seek out these kinds programs that are relevant and impactful to the leadership training needs of our community. We stand ready to help you with the implementation of this program and look forward to the integration of your Doctorates into the working elements of our economy.

Sincerely,

Wayne L. Dailey
Vice President of Knowledge Platforms
Item E.5. Northwestern State University’s request for approval to award an Honorary Bachelor’s Degree in Education to Mrs. Noella Black Lyons at the Fall Commencement Exercises.

EXECUTIVE SUMMARY

Northwestern State University requests approval to award an Honorary Bachelor’s Degree in Education to Mrs. Noella Black Lyons at the Fall Commencement Exercises. Mrs. Lyons, a native of Plaquemines Parish, worked hard to pursue an education degree and teaching certificate at Northwestern in the early 1940s.

Mrs. Lyons left college prematurely to teach in Port Sulphur per the request of the Superintendent of Schools. The Superintendent made the request as a result of the invasion of Pearl Harbor which required a number of teachers in Mrs. Lyons’ hometown to serve in the military. Following World War II, Mrs. Lyons returned to the University to complete her degree in education. Shortly thereafter, she met her husband who was participating in naval aviation training at the institution. Her husband’s career required them to travel to different parts of the country. Mrs. Lyons left the University with barely more than a semester remaining before her graduation.

Although Mrs. Lyons was unable to complete her degree program she continued to have a passion for teaching. Once she and her family relocated to New Orleans, Mrs. Lyons served as a substitute teacher at area schools. On December 25, 2016, Mrs. Lyons will be 94 years old and Northwestern would be honored to bestow her with an honorary bachelor’s degree in education.

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 Northwestern State University’s request to award an Honorary Bachelor’s Degree in Education to Mrs. Noella Black Lyons at the Fall Commencement Exercises.
September 30, 2016

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

Re: Honorary Bachelor’s Degree in Education for Mrs. Noella Black Lyons

Dear Dr. Reneau:

Northwestern State University is requesting that the following item be placed on the agenda for approval at the October 2016 Board Meeting:

Permission to award an “Honorary Bachelor’s Degree in Education” to Mrs. Noella Black Lyons at our December 2016 commencement ceremonies.

Thank you for your consideration of this request.

Sincerely,

[Signature]

Dr. James B. Henderson
President

Attachment
September 16, 2016

Dr. Dan Reneau, President
University of Louisiana System
1201 North Third Street, Suite 7-300
Baton Rouge, La. 70802

Dear Dr. Reneau:

Please accept this letter as a request for approval by the Board of Supervisors of the University of Louisiana System for Northwestern State University to bestow an Honorary Bachelor's Degree in Education on Mrs. Noella Black Lyons.

Mrs. Lyons, who grew up in Plaquemines Parish, enrolled at Northwestern in the early 1940s to pursue an education degree and teaching certificate.

Following the invasion of Pearl Harbor, most of the men in her small hometown, including a number of teachers, left to serve in the military. She was asked by the Superintendent of Schools to return to Port Sulphur as a teacher although she had not graduated from college.

When World War II ended, she returned to Northwestern to complete work toward her degree in education. But she met a young man who was participating in Naval aviation training at the school. He became her husband of 54 years, and she left Northwestern with barely more than a semester remaining before her graduation to travel to different parts of the country with him during his career in military service and later as a petrochemical engineer.

After moving to New Orleans, she served as a frequent substitute teacher in area schools and raised her family. Her daughter became a Tulane Law School graduate and later served as Chief Counsel for the United States Custom Service. Her son has been a physician in Hammond for more than 40 years.

Mrs. Lyons' grandson, a retired Lt. Colonel in the U.S. Air Force, submitted the request in an eloquent and touching letter for the university to consider presenting her an honorary degree in education.

She will be 94-years-old on Christmas Day, and her grandson suggested that the degree could be awarded at Northwestern's December commencement program while Mrs. Lyons is still healthy and "young enough both mentally and physically to appreciate it."

Northwestern would be honored to bestow the honorary degree upon Mrs. Lyons, and the board's consideration of this request is deeply appreciated.

Sincerely,

[Signature]

Jim Henderson
President
Item E.6. University of Louisiana at Lafayette’s request for approval of a Proposal for a Master of Science in Environmental Resource Science.

EXECUTIVE SUMMARY

The University of Louisiana at Lafayette (UL Lafayette) requests approval of a proposal for a Master of Science (M.S.) in Environmental Resource Science. In August 2015 the Letter of Intent was approved by the Board of Supervisors for the University of Louisiana System with approval granted by the Board of Regents in February 2016. Per Regents' Academic Affairs Policy 2.05 an external consultant (Scott Wood, Dean, College of Science and Mathematics, North Dakota State University) was engaged to review the graduate program proposal. Dr. Wood found the proposal to be one that did a good job in framing both the state and national need for graduates in this discipline at the MS level. He went on to state the following in the closing portion of his report: “Not only is the program realistic, but I think it is an entirely logical step for ULL to take given the need for scientists in the field, the strengths they have in related fields, and the expertise and experience of the key faculty.”

The purpose of the proposed program is to produce highly-trained environmental scientists who will address challenges related to two of Louisiana’s most critical environmental resources, water and soil. This Master’s degree will focus on the principles and practice of investigating and characterizing water and soil resources as well as those employed to successfully manage and remediate water and soil resources. Considerable emphasis will be dedicated to preparing students to identify and use the appropriate technologies in these areas. In addition, students will learn about the interactions of water and soil resources with biological systems. The objectives of the proposed degree program are as follows: (1) To prepare and train master's level environmental scientists to specialize in water and soil resources by providing them with a state-of-the-art interdisciplinary curriculum founded on four core courses in water and soil studies; (2) To equip these students for a wide variety of careers in the environmental arena by providing them an interdisciplinary curriculum of elective courses as well as interdisciplinary research and training opportunities supported by faculty from multiple disciplines; and (3) To develop a highly-skilled, technically-training, and critically-thinking workforce that will benefit the state of Louisiana by helping industries and governmental agencies manage and remediate vital water and soil resources.

The 35-credit hour curriculum will have thesis and non-thesis options with courses required of the proposed program organized into the categories of Water Resources (6 hrs), Soil Resources (6 hrs), Environmental Methods (3 hrs) and Electives (12 hrs, selected from a designated list of courses). Students pursuing the thesis option will enroll in six thesis hours while those pursuing the non-thesis option will complete a three-hour capstone course as well as a three-hour internship. Substantial flexibility is built into the program regarding which courses are
available to satisfy the Environmental Methods requirement and 12 hours of electives in order to provide students with the opportunity to individualize their curriculum within the over-arching theme of water and soil resources. This flexible, inter- and multi-disciplinary approach is important for the development of a broad-based applied science program, but at the same time allows for a considerable level of specialization. The campus believes that this educational approach is precisely what is required to develop a workforce that can address a variety of environmental challenges, particularly those dealing with water and soil issues specific to Louisiana.

The most comparable degree programs in Louisiana include two currently offered by LSU: (1) MS in Renewable Natural Resources with the following five concentrations: Fisheries and Aquaculture, Forest Products, Forestry and Forest Resources, Watershed Science and Wildlife and (2) MS in Environmental Science which primarily focuses on agriculture and includes the following three concentrations: Agronomy, Horticulture and Soil Science. The University of New Orleans has a program in Earth and Environmental Science at the MS level, but it is more Geoscience-focused than what is being proposed by UL Lafayette. McNeese State University offers an MS degree in Environmental and Chemical Science; however, this program has more of a Chemistry base. These existing programs clearly have different missions than the program proposed by UL Lafayette which will focus specifically on soil and water resources. UL Lafayette offers a BS in Environmental Sciences (implemented in Fall 2011 and completed 10 students in AY 2015-16) which has three concentrations: soil and water, environmental quality and digital geography. The proposed MS degree would build upon the existing baccalaureate degree and would provide graduate level education specific to water and soil resources which is currently not available in Louisiana.

According to the U.S. Bureau of Labor Statistics, job demand in Environmental Science is driven by “Heightened public interest in the hazards facing the environment, as well as the increasing demands placed on the environment by population growth.” Job growth in this area is expected to be around 15% over the next decade, which is substantially faster than the national average for all jobs. Occupational forecasts provided by the Louisiana Workforce Commission also indicate a rise in demand for Environmental Scientists in the state. Although some environmental science jobs are obtainable with an undergraduate degree, there are considerable advantages for students who earn a graduate degree in Environmental Science. Earning a graduate degree will provide students with more career options, positions of greater responsibility, and increased pay. Companies and government agencies (i.e., RT Environmental Services, Sherry Laboratories, National Park Services, Louisiana Department of Environmental Quality, etc.) recognize the need for highly-qualified students with a strong background in water and soil resources and have committed to providing paid internships in support of what is being proposed by UL Lafayette.

The proposed program will recruit students on the UL Lafayette campus who receive undergraduate degrees in Environmental Science, Geology, Biology, Physics and Chemistry; collectively, these programs annually graduate 128 students. Individuals who have earned a baccalaureate degree in a related scientific or engineering field from institutions other than UL Lafayette will also provide a pipeline of potential graduate students.
The proposed program can be fully implemented with little new costs to UL Lafayette. No new faculty will be necessary since existing environmental science, geology, biology, chemistry and civil engineering faculty will provide sufficient instructional support. The vast majority of the necessary courses are already being taught at UL Lafayette. Costs incurred for graduate assistantships (four in total) represent a minimal but necessary investment and will be matched by industry-supported internships and offset by tuition and fees.

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 of a Master of Science in Environmental Resource Science (CIP Code 03.0199).
October 6, 2016

Dr. Daniel D. Reneau, Jr.
Interim President
University of Louisiana System
1201 North Third Street, Suite 7-300
Baton Rouge, LA 70802

Dear Dr. Reneau:

This is to request approval to offer a new degree program, the Master of Science in Environmental Resource Science.

Please place this item on the agenda for consideration at the October 2016 meeting of the Board of Supervisors.

Sincerely,

E. Joseph Savoie
President

Attachments
Louisiana Board of Regents

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:

<table>
<thead>
<tr>
<th>Institution:</th>
<th>Requested CIP, Designation, Subject/Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Louisiana at Lafayette</td>
<td>CIP 03.0199, Natural Resources Conservation and Research; Master of Science in Environmental Resource Science</td>
</tr>
</tbody>
</table>

Contact Person & Contact Info:

Dr. Azmy Ackleh
Dean, Ray P. Authement College of Sciences
University of Louisiana at Lafayette
(337)-482-6986
ackleh@louisiana.edu

Date Letter of Intent was approved by Board of Regents: February 22, 2016

Date this Proposal was approved by Governing Board: 

Planned Semester/Term & Year to Begin Offering Program: Spring 2017

1. Program Description

Describe the program concept: (a) purpose and objectives; (b) mode of delivery (on-site/hybrid/on-line). Describe plan for developing and rolling out new courses.

(a) Purpose and Objectives

The purpose of the proposed Master's degree program in Environmental Resource Science is to produce highly-trained environmental scientists who will address challenges related to two of Louisiana's most critical environmental resources, water and soil. This Master's degree program will focus on the principles and practice of investigating and characterizing water and soil resources as well as those employed to successfully manage and remediate water and soil resources. Considerable emphasis will be dedicated to preparing students to identify and use the appropriate technologies in these areas. In addition, students will learn about the interactions of water and soil resources with biological systems. The objectives of the proposed degree program in Environmental Resource Science are as follows:

1. To prepare and train master's level environmental scientists to specialize in water and soil resources by providing them with a state-of-the-art interdisciplinary curriculum founded on four core courses in water and soil studies.

2. To prepare these students for a wide variety of careers in the environmental arena by providing them an interdisciplinary curriculum of elective courses as well as interdisciplinary research and training opportunities supported by faculty from multiple disciplines.

3. To develop a highly-skilled, technically-trained, and critically-thinking workforce that will benefit the state of Louisiana by helping industries and governmental agencies manage and remediate vital water and soil resources.

The proposed degree program in Environmental Resource Science will be interdisciplinary in its focus on water and soil resources. Core courses in Environmental Science and Geology are complemented by elective courses in Biology, Civil Engineering, and Chemistry. Courses and research opportunities also will be supported by participating faculty from Biology, Chemistry, Civil Engineering, Environmental Science, and Geology.

Our curriculum is based on several foundational science domains (e.g., Physical, Earth, and Biological Sciences) specifically identified in the FIRST Louisiana report. Environmental Resource Science is both strategic for Louisiana and aligned with Louisiana's workforce needs. Louisiana's core industry, science, and technology sectors are direct reflections of the natural resources available in our state. For example, Louisiana is the third leading producer of rice in the U.S. and is a global hub for the upstream and downstream petroleum industry. These industries require
tremendous quantities of high-quality water. Our state hosts 40% of the nation’s freshwater wetlands, areas that are critical to the seafood industry and serve to mitigate coastal flooding and erosion. Like water, soil resources are fundamental to agriculture and to coastal restoration efforts. Louisiana has 44 soil and water conservation districts that are dedicated to sustaining and conserving water quality and soil stability in croplands, woodlands, wetlands, and waterways throughout the state (Louisiana Department of Agriculture and Forestry website).

The focus of the proposed degree program in Environmental Resource Science is a key factor that, in combination with the Gulf-coast location of UL Lafayette and the expertise of the faculty at UL Lafayette, will make this a premier program for Louisiana and the region. The proposed program in Environmental Resource Science will further advance Louisiana as a national leader in environmental research and development.

By relying in large part on existing courses with additional capacities for enrollments that are being taught by existing faculty, we are able to effectively balance resources.

(b) Mode of Delivery

The mode of delivery for UL Lafayette’s Master of Science in Environmental Resource Science is on-site (traditional face-to-face classroom instruction).

Map out the proposed curriculum, in sequence, identifying any incremental credentials and/or concentrations within the degree. Indicate which courses will be new, including those that would be offered in the new program as electives. Describe any special requirements (e.g., internships, comprehensive exam, thesis, etc.).

**Total Number of SCHs Required and Estimated Time Required for Student Completion:**

We propose a 35-hour curriculum with thesis and non-thesis options. The proposed degree program draws largely from existing courses in Environmental Science, Geology, and related disciplines (Biology, Civil Engineering, and Chemistry) that have the capacity to absorb higher enrollments. For example, the average enrollments over the last 3 years for ENVS 455G, ENVS 484G, ENVS 490G, GEOL 431, GEOL 440, and GEOL 470 have been 16.7, 12.0, 13.5, 10.7, 31.5, and 37.5 students, respectively. These enrollment numbers are respectively 18.3, 23.0, 21.5, 29.3, 18.5, and 32.8 students below what we estimate to be the maximum feasible enrollments for these courses (Table 1). Specifically, the proposed program relies on 47 graduate courses already in existence at UL Lafayette, thereby creating a diverse and comprehensive curriculum that, additionally, attests to established strengths at UL Lafayette in this discipline and related fields of study.

These courses are organized into the categories of (1) Water Resources, (2) Soil Resources, (3) Environmental Methods (applied to water and soil resources), and (4) Biophysical Relationships. The Water Resources, Soil Resources, and Environmental Methods courses constitute the programmatic core. The Water and Soil Resources courses will provide students with a scientific foundation for addressing challenges within the field of Environmental Resource Science. The Environmental Methods courses will provide students with an understanding of the tools used to address these challenges. The Biophysical Relationships courses are available so that students can develop a basic understanding of the interactions of soil and water resources with biological systems. In addition to this rich curriculum, we will create 5 new program-specific courses (see Table 1 below). A limited number of additional 500-level courses in the Water Resources or Soil Resources categories may be developed and added to the approved course list once the program is operational and demonstrates growth.

Substantial flexibility is built into the program regarding courses that are available to satisfy the Environmental Methods requirement and 12 hours of electives. With the exception of two required courses each in the Water and Soil Resources category, no specific sequence of additional courses will be required. This flexible curriculum structure will provide students with the opportunity to individualize their curriculum within the overarching theme of water and soil resources. This flexible, inter- and multi-disciplinary approach to educating graduate students is important for the development of a broad-based applied science Master’s degree program, but at the same time allows graduate students to gain an appreciable level of specialization that matches their individual career objectives.
Thesis Option (35 total graduate credit hours):

- Thesis = 6 hours (ERS 599)
- Seminar = 2 hours (ERS 559)
- Water Resources Required Courses = 6 hours
  1. ENVS 484G – Watershed Science. Application of the planning process at the watershed (and larger) scale emphasizing the use of GIS and computer modeling tools.
- Soil Resources Required Courses = 6 hours
  1. ENVS 490G – Environmental Pedology. Soil-solute interactions occurring as a result of natural and human activities.
  2. ENVS 580 – Fate of Pollutants in Soils and Natural Waters. Thermodynamics and surface reactions affecting the presence, distribution, and fate of pollutants.
- Environmental Methods = 3 hours (Any of the approved Environmental Methods courses in Table 1)
- Electives = 12 hours. Any of the approved courses in Table 1 with no more than 9 hours from the Biophysical Relationships category.

Non-Thesis Option (35 total graduate credit hours):

- This curriculum will be identical to curriculum for the thesis option except that the 6 thesis hours will be divided into either: (1) 3 additional hours of electives from any of the approved courses and a final 3-credit hour capstone project; or (2) a 6-credit hour internship.

The Final Capstone Project (ENVS 589, 3hrs) will be assigned by a faculty advisor and approved by a Capstone Committee comprised of graduate faculty members of the Environmental Science Program. The outcome of the project must include a 10- to 15-page written report, which must be approved by the student’s faculty advisor and the Capstone Committee, who assess satisfactory completion of this comprehensive requirement.

The Internship (ENVS 579, 6hrs) must include the equivalent of one semester of part-time work with an industry partner. Prior to initiation of the internship, the student will be required to develop a work plan with the company/agency and his/her graduate faculty advisor outlining the expected requirements or products of the internship. At a minimum, the student will complete a final written report and deliver a presentation of his or her work. Details regarding the length and format of the report and presentation will be developed by the student’s faculty advisor and a Thesis Committee comprised of graduate faculty members of the Environmental Science Program, in consultation with the industry partner.

Degree requirements:

1. 400-level courses taken for undergraduate credit cannot be taken again for graduate credit.
2. For the Thesis option, at least 15 credit hours of 500-level courses that count toward the degree must be taken.
   For the Non-Thesis option, at least 18 credit hours of 500-level courses that count toward the degree must be taken. We will formally develop 5 new 500-level classes, each having a unique content, course number and course description.
3. Students who may have already completed a required course within another program of study may substitute a different course within the same category (i.e., the Water Resources or Soil Resources categories). The course substitution must be approved by the graduate committee of the Environmental Science Program and by the Dean of the Graduate School.
<table>
<thead>
<tr>
<th>Course Level/Number</th>
<th>Course Name and Department Offering Course</th>
<th>Max Feasible Enrollment</th>
<th>Who is currently qualified to teach this course?</th>
<th>New or Existing Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 445(G)</td>
<td>COASTAL SCIENCES. (3, 0, 3). Management of coastal aquatic ecosystems; emphasis on interactions with terrestrial and atmospheric systems; hydraulic and ecological modeling; and coastal restoration. Rest: Permission of instructor required.</td>
<td>30</td>
<td>Visser</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 484(G) REQUIRED</td>
<td>WATERSHED SCIENCE. (3, 0, 3). Application of the planning process at the watershed (and larger) scale emphasizing the use of GIS and computer modeling tools.</td>
<td>35</td>
<td>Costigan; Borrok; Poudel</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 486(G)</td>
<td>WATER QUALITY. (3, 2, 4). Design of data collection and analysis of chemical and biological properties necessary to support the planning process.</td>
<td>35</td>
<td>Poudel; Borrok; Hillman</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 431(G)</td>
<td>INTRODUCTION TO GEOCHEMISTRY. (3, 0, 3). Introduction to the concepts and principles of Geochemistry.</td>
<td>40</td>
<td>Schubert; Borrok</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 440(G)</td>
<td>OCEANOGRAPHY. (2, 2, 3). Formation of the earth's oceans and the role they play in the global geologic, climatologic, and biologic systems.</td>
<td>50</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 470(G) REQUIRED</td>
<td>GROUND WATER. (3, 0, 3). Occurrence, movement, distribution, and discussion of problems associated with supply and change in composition of ground water.</td>
<td>70</td>
<td>Duex; Poudel; Borrok; Costigan</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 510</td>
<td>ADVANCED ENVIRONMENTAL GEOLOGY. (2, 3, 3). Content varies. May be repeated for credit. Application of Geology to problems resulting from the increasingly intense use of the earth and its resources. Rest: Permission of instructor required.</td>
<td>35</td>
<td>Duex; Schubert; Borrok; Costigan; Hillman</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 509</td>
<td>ADVANCED GROUND WATER HYDROLOGY. (3, 0, 3). Discussion of case histories and examples that apply the basic principles of ground water Hydrology to specific sites and problems. A summary of current thoughts, ideas, and practical applications related to Hydrology. Prereq: GEOL 470(G) or permission of instructor required.</td>
<td>35</td>
<td>Duex; Costigan</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 532</td>
<td>PETROLEUM GEOCHEMISTRY. (2, 3, 3). Concepts and principles of Geochemistry. Course includes examination of natural samples.</td>
<td>45</td>
<td>Borrok</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 407(G)</td>
<td>ENVIRONMENTAL TOXICOLOGY. (3, 3, 4). Overview of occurrence of pollutants in aquatic and terrestrial environments and the atmosphere, pollutant dynamics and metabolism, and pollutant effects on biota at different organizational levels. Laboratory centers on methodology, instrumentation, and other practical aspects.</td>
<td>20</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 441(G)</td>
<td>LIMNOLOGY AND OCEANOGRAPHY. (3, 3, 4). Origins, geology, physics, chemistry, and biological productivity of inland water bodies, estuaries, and oceans. Laboratory centers on methodology, instrumentation, and other practical aspects of freshwater and marine studies; required field trips.</td>
<td>25</td>
<td>Biology Faculty</td>
<td>Existing</td>
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<tr>
<td>CIVE 506</td>
<td>ADVANCED HYDROLOGY. (3, 0, 3). Quantitative approaches</td>
<td>20</td>
<td>Habib; Civil</td>
<td>Existing</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Instructor(s)</td>
<td>Availability</td>
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<td>---------</td>
<td>--------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>CIVE 546</td>
<td>PROBABILISTIC METHODS IN HYDROSCIENCE. (3, 0, 3).</td>
<td>20</td>
<td>Habib; Civil Engineering Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>CIVE 561</td>
<td>WATER TREATMENT. (3, 0, 3). Design of domestic and industrial water treatment facilities with emphasis on the basic scientific principles underlying the design procedures.</td>
<td>25</td>
<td>Habib; Gang</td>
<td>Existing</td>
</tr>
</tbody>
</table>

**Soil Resources (existing courses)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Instructor(s)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 490(G)</td>
<td>ENVIRONMENTAL PEDOLOGY. (3, 0, 3). Soil-solute interactions occurring as a result of natural and human activities.</td>
<td>35</td>
<td>Poudel; Hillman</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 493(G)</td>
<td>SOIL-PLANT RELATIONSHIPS. (3, 0, 3). Chemical, biological, and physical properties of soils in relation to nutrient cycling and plant growth, including evaluation of soil supplements.</td>
<td>35</td>
<td>Visser; Poudel</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 495(G)</td>
<td>SOIL GENESIS AND SURVEY. (3, 0, 3). Formation, distribution, and classification of soils as natural bodies. Restr: Non-majors, permission of instructor required.</td>
<td>35</td>
<td>Poudel; Hillman</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 498(G)</td>
<td>SOIL BIOLOGY. (3, 0, 3). Role of plants, animals, and microbes in soil generation and the biochemical transformations in soil ecosystems; required for plant nutrition.</td>
<td>35</td>
<td>Hillman; Poudel</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 580</td>
<td>FATE OF POLLUTANTS IN SOILS AND NATURAL WATERS. (3, 0, 3). Thermodynamics and surface reactions affecting the presence, distribution, and fate of pollutants</td>
<td>35</td>
<td>Poudel; Borrok; Hillman</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 433(G)</td>
<td>CLAY MINERALOGY. (2, 2, 3). Classification, identification, occurrence, and properties of clays.</td>
<td>50</td>
<td>Schubert; Poudel</td>
<td>Existing</td>
</tr>
<tr>
<td>CIVE 563</td>
<td>SOLID AND HAZARDOUS WASTE MANAGEMENT. (3, 0, 3). Current issues and legislation. Collection, storage and disposal. Treatment technologies including incineration and sanitary and hazardous waste landfills.</td>
<td>30</td>
<td>Civil Engineering Faculty</td>
<td>Existing</td>
</tr>
</tbody>
</table>

**Environmental Methods (existing courses)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Instructor(s)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 473(G)</td>
<td>REMOTE SENSING IN GIS. (2, 2, 3). GIS remote sensing and analysis based on aerial photography and satellite imagery, applying this technology for analyzing spatial issues. Prereq: ENVS 455(G) or GEOL 330.</td>
<td>30</td>
<td>Richter; Geology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 487(G)</td>
<td>ADVANCED GIS ANALYSIS AND APPLICATIONS. (2, 2, 3). Prereq: ENVS 464(G) and ENVS 473(G).</td>
<td>30</td>
<td>Costigan; Hillman</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 455(G)</td>
<td>GEOGRAPHIC INFORMATION SCIENCE 1 (3,2,2). GIS theory and methodology, practical GIS software skills and basic scientific computing skills, map development and basic photo interpretation. Prereq: Literacy in Micro-Computers.</td>
<td>20</td>
<td>Costigan; Hillman</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 464(G)</td>
<td>GEOGRAPHIC INFORMATION SCIENCE 2 (3,2,2). Emphasis on practical GIS applications, advanced GIS software skills map development and modeling. Prereq: ENVS 455(G)</td>
<td>20</td>
<td>Costigan; Hillman</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 420(G)</td>
<td>GEOPHYSICS I. (1, 2, 4). Concepts, techniques, and applications. Emphasis on utility of gravity, magnetic, electrical, electromagnetic, and seismic data in the investigation of the subsurface at various depths.</td>
<td>50</td>
<td>Geology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 432(G)</td>
<td>INSTRUMENTAL EXAMINATION OF EARTH MATERIALS. (2, 2, 3). Application of x-ray diffraction, x-ray fluorescence spectroscopy, scanning electron microscopy, and light microscopy to examine minerals, rocks, soils, and scale deposits.</td>
<td>35</td>
<td>Geology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 437(G)</td>
<td>COMPUTER APPLICATIONS IN GEOLOGY. (2, 2, 3). Geological applications software. Includes GIS, CAD, and mapping</td>
<td>30</td>
<td>Geology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title and Description</td>
<td>Credits</td>
<td>Department</td>
<td>Status</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------</td>
<td>---------</td>
<td>------------</td>
<td>--------</td>
</tr>
<tr>
<td>ENVS 460(G)</td>
<td>SITE ASSESSMENT AND REMEDIATION. (3, 0, 3). A assessment and remediation of contaminated water sites and other geologic situations; includes risk and hazard analysis. Prereq or Coreq: GEOG 470 or permission of instructor.</td>
<td>35</td>
<td>Geology Faculty and adjuncts</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 504</td>
<td>MICROSCOPY THEORY AND APPLICATIONS. (3, 0, 3). Includes light, electron, fluorescence, and scanning probe microscopy. Emphasis on computer-based acquisition and processing of images.</td>
<td>18</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 427(G)</td>
<td>EXPERIMENTAL DESIGN AND ANALYSIS. (3, 0, 3). Fundamentals of designing and implementing field experiments from the initial planning stage to data analysis, interpretation, and publication.</td>
<td>25</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 590</td>
<td>ANALYTICAL TECHNIQUES. (3-6). Training in the use of advanced research instrumentation including chromatography, fluorometry, image analysis and data interpretation. Restr: Permission of instructor required.</td>
<td>25</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 502</td>
<td>QUANTITATIVE ECOLOGY. (3, 0, 3). Quantitative methods for analysis in ecological studies including ecological models, model selection, maximum likelihood estimation, and mark-recapture analysis.</td>
<td>25</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 503</td>
<td>ECOLOGICAL MODELS AND DATA. (3, 0, 3). Presents advanced statistical techniques that are a framework for comparing alternative mechanistic ecological models to empirical data. The combination of statics and models provides a quantitative basis for inferring the processes at work in an ecological system.</td>
<td>25</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 575</td>
<td>STATISTICAL ECOLOGY. (4, 0, 4). Design, analysis, and presentation of results of ecological experiments and field studies, with emphasis on hypothesis testing and statistical modeling. Prereq: STAT 417(G) or permission of instructor required.</td>
<td>25</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>CIVE 567</td>
<td>EXPERIMENTAL ANALYSIS FOR ENVIRONMENTAL ENGINEERS. (0, 0, 3). Examination of laboratory techniques for assessing water quality and sludge contamination. Optical, electrical, gas chromatography, and x-ray methods are included.</td>
<td>25</td>
<td>Civil Engineering Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>CHEM 430 (G)</td>
<td>INSTRUMENTAL ANALYSIS. (5, 4, 3). Application of methodologies and sample preparation related to gas chromatography with FID and MS detection, Atomic adsorption spectroscopy, and UV-vis spectrophotometry.</td>
<td>15</td>
<td>Chemistry Faculty</td>
<td>Existing</td>
</tr>
</tbody>
</table>

**Biophysical Relationships (existing courses)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title and Description</th>
<th>Credits</th>
<th>Department</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 414(G)</td>
<td>ORNITHOLOGY. (3, 3, 4). Avian evolution, ecology, physiology, and behavior. Laboratories include required field trips and focus on identification, life history, and conservation of birds. Restriction: Permission of instructor required.</td>
<td>25</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 445(G)</td>
<td>ICHTHYOLOGY. (2, 4, 4). Classification, zoogeography, and evolution of fishes. Includes ecological factors affecting fish community structure, adaptations of specialized fish fauna, including those of deep sea, epipelagic, polar, and coral reef habitats. Required field trips. Restriction: If prerequisites not met, permission of instructor required.</td>
<td>25</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 415(G)</td>
<td>BIOGEOGRAPHY. (3, 0, 3). Integration of concepts of ecology, evolutionary biology, geology, and physical geography relative to distribution of species.</td>
<td>25</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 580</td>
<td>MARINE ECOLOGY. (3, 0, 3). Discussions of basic principles of marine ecology, including productivity, dynamics of populations, factors affecting distribution, and interactions between organisms.</td>
<td>20</td>
<td>Biology Faculty</td>
<td>Existing</td>
</tr>
</tbody>
</table>
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).

The focus and structure of the proposed degree program is shaped to match the most recent developments associated with Louisiana's workforce needs and projected growth areas. The proposed degree program in Environmental Resource Science follows recommendations put forth in the FIRST Louisiana report and the BOR Master Plan for Secondary Education (2011, revised 2012), and targets the need for a skilled interdisciplinary workforce that can address current and future challenges associated with the state's water resources and restoration activities. More recent recommendations to the Louisiana Board of Regents presented by the Master Plan Research Advisory Committee in 2014 highlight the need for new academic programs in interdisciplinary applied sciences such as the one proposed here.

The proposed degree program in Environmental Resource Science specifically addresses the following goals and objectives in the BOR 2011 Master Plan:

Goal 1, Objective 1.7: “Develop a Skilled Workforce to Support an Expanding Economy.”

The proposed degree program will prepare a new generation of highly skilled workers in an important STEM field. Our graduates will support technical management and problem solving in areas associated with the environmental resources (specifically water and soil) that are critical to the State of Louisiana. Contributing to the development of a qualified labor pool in the domain of the environmental sciences will facilitate attracting new businesses and retaining existing businesses in Louisiana.

Goal 2, Objective 2.1: “Maintain and Build Strength in Foundational Science and Technology Disciplines Identified in FIRST Louisiana.”

Physical Science is recognized by FIRST Louisiana as a key foundational science. Water resources are fundamental to 4 of the 6 transitional research domains (coastal, environmental, agricultural, energy) and fundamental to at least 3 of the 7 core industry S&T sectors (petrochemical, energy and environmental, and agriculture and wood products) in FIRST Louisiana. The high-growth target industries of coastal resilience and energy production are also underpinned by water resource management. More recent recommendations to the Louisiana Board of Regents presented by the Master Plan Research Advisory Committee in 2014 highlight the need in Louisiana for the development of new academic programs in interdisciplinary applied sciences such as the one proposed here.

“Recruit, cultivate, and retain research talent in the foundational sciences.”

The addition of a Master's degree program will allow UL Lafayette to greatly expand research in water and soil resources, which will attract quality, research-active faculty and provide an incentive for the university to keep them.

“Develop and maintain cutting-edge infrastructure and facilities for fundamental science and technology research.”

Although cutting-edge laboratory and field facilities are already in place, the Master's degree program will provide new opportunities to advance infrastructure. We plan to leverage the new program to secure instrumentation through grants and can rely on the more highly-capable graduate students to help operate and maintain equipment.
Goal 2, Objective 2.2: "Promote Multidisciplinary and Multi-Institutional Collaborative Research Efforts."
Environmental Science, by its very nature, is the most inter- and multi-disciplinary STEM field. The proposed degree program is designed to accept qualified students with Bachelor’s degrees from a variety of disciplines, including Biology, Geology, Chemistry, Environmental Science, Civil Engineering, and related fields. Moreover, the proposed curriculum includes the possibility of coursework in each of these disciplines. New collaborations among students and faculty in these different disciplines will develop through research projects and coursework. We have 7 supporting faculty members for the proposed degree program in Environmental Resource Science from outside the School of Geosciences (in Civil Engineering, Chemistry, and Biology).

"Address multi-disciplinary and multi-institutional collaborations in campus research plans."
The proposed multidisciplinary approach is consistent with strategic initiative 3 for research within the University of Louisiana at Lafayette’s 2015-2020 Strategic Plan. This initiative will expand research programs beyond our existing strengths and take advantage of our historical, cultural, and geographic setting for research and scholarly purposes. Our proposed program greatly leverages our geographic setting for research focused on water and soil resources. Moreover, the multi-disciplinary nature of our program ties into the key performance indicator of increasing collaborations across disciplines.

Goal 2, Objective 2.3: "Sustain and Advance Research Commercialization and Translational Activities that Promote Economic Development in Louisiana."
We are embracing translational research as a key focus of the proposed degree program in Environmental Resource Science. This focus includes an emphasis on hands-on training and internship opportunities. Our program is designed to remain tightly connected to industry, a significant feature of the program intended to enhance commercialization and translational research.

"Promote Multidisciplinary and Multi-Institutional Collaborative Research Efforts."
As described in Goal 2, Objective 2.2 (above), the proposed concentration areas include courses from multiple disciplines, a step that will foster joint research efforts. Many of our faculty members are already collaborating across disciplines at UL Lafayette. As an example, we recently received a multi-disciplinary BOR enhancement grant for building living wetland laboratories. This grant was led by a faculty member in our Environmental Science Program with collaborators from Geology, Biology, and Civil Engineering. All of these collaborators are listed as primary or supporting faculty for our master’s program in Environmental Resource Science.

"Foster networking and strategic collaborations between higher education, government, and Louisiana’s existing and prospective high-growth industry sectors."
Louisiana’s high-growth industry sectors include Energy Production and Coastal Resilience. Proper understanding and management of water and soil resources are critical for these industries. We will be working with local industry in these areas via internship and research opportunities.

"Build capacity in areas of competitive advantage and target niches which align with campus and State research priorities."
As described above, our target niches are closely aligned both with the research priorities of UL Lafayette and the State of Louisiana. By filling these niches, we add value to our program for our students, our community, and society.

Economic Development and Workforce Needs:
The Louisiana Workforce Commission indicates that Environmental Science is a high-demand job for Louisiana. There are projected to be 80 annual job openings (30 new + 50 replacements) over the next decade for Environmental Scientists and Specialists (Table 2). There is additional demand for Environmental Scientists as Natural Science Managers and Conservation Scientists, as 30 new positions will be available in Louisiana over the next decade (Table 2).

Although some environmental science jobs are obtainable with a BS degree, there are considerable advantages for students who earn a graduate degree within an area of Environmental Science. In most areas of Environmental Science, earning a graduate degree will provide students with more career options, positions of greater responsibility and leadership, and increased pay. For example, according to federal pay scales, an entry-level environmental scientist with a BS degree would start out as a GS 5, making around $32,000 annually (depending on location). An individual holding a MS degree in the same field at the same location would start out as a GS 9, making around...
$48,000 annually, amounting to a salary enhancement of 50%. To test whether these financial differences were also present in the private sector, we interviewed 5 businesses that hire environmental scientists in our region. The average starting salary difference between an environmental scientist holding only a BS degree and one additionally holding a MS degree was 26.3%, with the MS-degree holders earning the higher salaries.

<table>
<thead>
<tr>
<th>Occ. Code</th>
<th>Occupational Title</th>
<th>2012 Estimate</th>
<th>2022 Projected</th>
<th>10 Year Growth</th>
<th>Annual New Growth</th>
<th>Annual Replacement</th>
<th>Annual Total Openings</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-9121</td>
<td>Natural Sciences Managers</td>
<td>400</td>
<td>450</td>
<td>50</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>19-1031</td>
<td>Conservation Scientists</td>
<td>160</td>
<td>180</td>
<td>20</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>19-2041</td>
<td>Environmental Scientists and Specialists, Including Health</td>
<td>1,660</td>
<td>1,950</td>
<td>290</td>
<td>30</td>
<td>50</td>
<td>80</td>
</tr>
</tbody>
</table>

In addition, job openings in Louisiana that are predicted to be created as a result of coastal restoration activities are estimated to range from 16,341 to 22,716 new jobs per year over the next 50 years (Ryan, 2014; The Economic Impact of Coastal Restoration and Hurricane Protection; Tulane Institute on Water Resources Law and Policy; Table 6). Although this job growth will be spread over many sectors, it is clear that environmental scientists could fill a measurable portion of technical, skilled positions.

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

The University of Louisiana at Lafayette is the largest member of the University of Louisiana System and is designated within the Carnegie classification as a Doctoral University with Higher Research Activity. The mission of the University is to offer an exceptional education informed by diverse worldviews grounded in tradition, heritage, and culture. We develop leaders and innovators who advance knowledge, cultivate aesthetic sensibility, and improve the human condition. The proposed Master’s degree program in Environmental Resource Science would strengthen UL Lafayette’s existing role as a developing research university and support UL Lafayette’s mission by adding to our educational portfolio and developing leaders and innovators in the much-needed areas of water and soil resource management. By producing graduates in these water and soil resource management we will help to strengthen the local and regional economy, and our students will use the expertise gained to help find solutions to environmental resource challenges at the state, national, and global levels thereby improving the human condition.

The proposed MS degree program in Environmental Resource Science will contribute to the University’s “environment, energy, and economics” area of excellence. The program is an institutional priority for UL Lafayette because it will provide new educational and research training opportunities for our students, increase the number of students receiving STEM degrees, and support the strategic research mission of the University. Among other key disciplines, UL Lafayette aims to become a leader in research and education focused on water resources and management. We are positioning ourselves as an institution to become leaders in translational research in this area, bridging the gap between fundamental and application-based research. Hence, the focus of the proposed Master’s level degree program on water and soil resources fits perfectly within the strategic research and educational interests of our University.

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.

The most comparable programs include LSU’s MS degree program in Renewable Natural Resources, LSU’s MS degree program offered by the School of Plant, Environmental & Soil Sciences (PEMSS), and LSU’s MS degree in “Environmental Science.” The University of New Orleans has a program in Earth and Environmental Science at the MS level, but it is more Geoscience-focused than what is being proposed here. McNeese State University offers an MS degree program in Environmental and Chemical Science; however, this program has a CIP code of 40.0599, which places it in the Chemistry category.
We performed a quantitative assessment of the degree of overlap with our program and the most comparable programs described above. The results are summarized in Table 3 and demonstrate that the proposed degree program in Environmental Resource Science has less than a 20% overlap with any of these existing programs.

LSU’s MS degree in Renewable Natural Resources includes the following five concentrations: Fisheries and Aquaculture; Forest Products; Forestry and Forest Resources; Watershed Science; and Wildlife. By contrast, UL Lafayette’s proposed MS in Environmental Resource Science has a programmatic core focusing on Water Resources, Soil Resources, and Environmental Methods. There appears to be no overlap with 4 of the 5 concentrations listed for the LSU program (Table 3). Admittedly, the Forestry and Forest Resources Science concentration of the LSU program (at 20% of the programmatic concentration) could overlap with approximately 30% of the proposed courses (largely Soil and GIS courses) in the UL Lafayette program. Even if the Forestry and Forest Resources concentration of the LSU program overlapped by 30% with the content of the proposed UL Lafayette program, the two programs would overlap by a maximum of 6% (i.e., 0.30 course overlap multiplied by 0.20 program concentration = 0.06 total overlap), thereby making the UL Lafayette and LSU degree programs 94% distinct (Table 3).

LSU’s MS degree program in Plant, Environmental & Soil Sciences is primarily focused on agriculture and includes the following three concentrations: Agronomy, Horticulture, and Soil Science. UL Lafayette’s proposed MS in Environmental Resource Science has limited overlap with the Agronomy and Soil Science concentrations (Table 3). The water resources courses in LSU’s program are focused on water management associated with crop production, whereas the proposed degree program in Environmental Resource Science takes a much broader approach to water resources. The soil science courses in both the Agronomy and Soil Science concentrations of the LSU program (at 67% of the programmatic concentration) would overlap in part with the Soil Resources focus of the UL Lafayette program. Considering that the soil courses of the LSU concentrations in Agronomy and Soil Science overlap 20% and 25%, respectively, with the Soil Resources aspects of the proposed UL Lafayette program, then these two programs overlap by approximately 15% in total, making them 85% distinct (Table 3).

LSU’s Environmental Science MS degree program has focus areas in (1) Biophysical Systems, (2) Environmental Planning and Management, and (3) Environmental Assessment and Analysis. Water and soil resources are addressed in the broader context of these three concentration areas. This approach contrasts with that of UL Lafayette’s proposed degree program in which soil and water resources are the primary programmatic focus. Our proposed program will have about a 15% total overlap with LSU’s Environmental Science Program (Table 3), making them 85% distinct.

UNO’s Earth and Environmental Science MS degree program offers projects in the areas of Igneous Petrology, Geophysics, Aquatic Ecology, Geomorphology, Coastal Oceanography, Coastal and Marine Geology, Sedimentology, and Paleontology. Of these nine research areas, only one is not typically associated with the Geosciences. The remaining research area at UNO that clearly falls in the realm of environmental science is Aquatic Ecology. Upon evaluation of the courses available within the UNO program, we found that our proposed degree program in Environmental Resource Science may overlap with those courses by as much as 20% (Table 4), making the two programs 80% distinct.

We understand that the issue of degree program duplication is important. However, in many cases partial duplication is necessary and healthy in order to develop degree programs that serve a special niche of the student population, while not omitting fundamental concepts and skills that fall under the umbrella of an ‘environmentally-oriented’ degree plan. In this way, students may specialize in specific areas of environmental science but nevertheless receive comprehensive training.

LA BoR – Program Proposal 10
### Table 3. Comparison of the amount of overlap of our proposed program with existing programs in the state

<table>
<thead>
<tr>
<th>Program</th>
<th>Concentrations</th>
<th>Overlap* (Yes/No)</th>
<th>Estimated % Overlap</th>
<th>Course Overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LSU Renewable Natural Resources</td>
<td>a. Fisheries and Aquaculture (20%)</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Forest Products (20%)</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Forestry and Forest Resources (20%)</td>
<td>Yes</td>
<td>30%</td>
<td>Soil Courses (4) GIS Courses (2)</td>
</tr>
<tr>
<td></td>
<td>d. Watershed Science (20%)</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. Wildlife (20%)</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL OVERLAP</td>
<td></td>
<td></td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>2. LSU Plant, Environment and Soil Science</td>
<td>a. Agronomy (33%)</td>
<td>Yes</td>
<td>20%</td>
<td>Soil Courses (4)</td>
</tr>
<tr>
<td></td>
<td>b. Horticulture (33%)</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Soil Science (33%)</td>
<td>Yes</td>
<td>25%</td>
<td>Soil Courses (5)</td>
</tr>
<tr>
<td>TOTAL OVERLAP</td>
<td></td>
<td></td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Environmental Planning and Management (33%)</td>
<td>Yes</td>
<td>5%</td>
<td>Water Quality Management</td>
</tr>
<tr>
<td></td>
<td>c. Environmental Assessment and Analysis (33%)</td>
<td>Yes</td>
<td>15%</td>
<td>Spatial Modeling, Field Techniques, Water Quality Modeling</td>
</tr>
<tr>
<td>TOTAL OVERLAP</td>
<td></td>
<td></td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>4. UNO's Program in Earth and Environmental Science</td>
<td>Yes</td>
<td>20%</td>
<td></td>
<td>Environmental Toxicology, Field Methods, Coastal Science, Oceanography</td>
</tr>
<tr>
<td>TOTAL OVERLAP</td>
<td></td>
<td></td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

*Overlap was calculated by examining the required or recommended course offerings identified on the program websites.

If approved, will the program result in the termination or phasing out of existing programs? (Is it a replacement?) Explain.

The program will not result in the termination or phasing out of existing programs, nor is it a replacement for any existing programs.

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).

The need for additional graduates in this area within the state of Louisiana was discussed above in Section 2. The need for Environmental Scientists is also growing nationally. Job growth from 2014-2024 is expected to be around 11%, which is substantially faster than the national average for all jobs (Table 4). Job demand in Environmental Science is driven by "Heightened public interest in the hazards facing the environment, as well as the increasing demands placed on the environment by population growth" (US Bureau of Labor Statistics).

<table>
<thead>
<tr>
<th>2014 Median Pay</th>
<th>$66,250 per year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$31.85 per hour</td>
</tr>
<tr>
<td>Entry-Level Education</td>
<td>Bachelor’s degree</td>
</tr>
<tr>
<td>Work Experience in a Related Occupation</td>
<td>None</td>
</tr>
<tr>
<td>On-the-Job Training</td>
<td>None</td>
</tr>
<tr>
<td>Number of Jobs, 2014</td>
<td>94,600</td>
</tr>
<tr>
<td>Job Outlook, 2014-2024</td>
<td>11% (Faster than average)</td>
</tr>
<tr>
<td>Employment Change, 2014-2024</td>
<td>10,200</td>
</tr>
</tbody>
</table>

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

We plan to recruit students on our own campus who receive BS degrees in Environmental Science, Geology, Biology, Physics, and Chemistry. It is difficult to assess demand among graduates of programs outside of Environmental Science, but the sheer number of annual graduates in all of these programs alone suggests that we will have an immediate and large demand for this program. For example, Biology, Chemistry, and Geology respectively graduate approximately 70, 15, and 10 students annually. Our proposed MS degree program in Environmental Resource Science would provide a new and compelling opportunity for these graduates.

Our current BS degree in Environmental Science is growing rapidly, and its enrollment and graduation rates provide a good example of the usefulness and appeal of this field in the region. We began with 31 students enrolled in 2011/2012, and this has quickly expanded to an enrollment of 74 in Fall 2015 (68 in Spring 2016). We are actively recruiting students for this program and, to that end, have recently developed a 2+2 relationship with South Louisiana Community College in Lafayette.

To assess demand for the Master’s degree program among our current students, we used a survey. Forty students responded to the survey, including 33 juniors and seniors. Of the surveyed students, 27.5% already planned to obtain a MS degree somewhere, regardless of our new program. However, when asked if they would be interested in enrolling in a MS degree program if one were developed at UL Lafayette, 21 students (over 50%) said yes, while 17 were unsure, and only two were uninterested. When asked about their motivation for pursing a MS degree, 85% of the surveyed students indicated that the opportunity to earn a higher salary was important or very important. More than 72% of respondents suggested that the opportunity to advance more quickly in industry was important or very important.

In addition to undergraduate students in Geosciences, it is clear that the production of Bachelor’s level degrees in Environmental Science in Louisiana is quite high and growing. For example, over the last 5 years Louisiana Tech University’s BS degree program in Environmental Science has averaged 11.4 graduates, while LSU’s BS degree program in Environmental Management Systems has averaged 11 graduates. Moreover, LSU’s BS program in Coastal Environmental Science has graduated more than 10 individuals in the last 2 years (this is a relatively new program). Environmental Science BS-degree programs at private institutions in Louisiana (Tulane and Loyola University) account for another 5 to 10 graduates annually. Hence, in combination with UL Lafayette’s BS degree program in Environmental Science, the production of students graduating with BS degrees in Environmental Science in Louisiana is approximately 45 to 50 students annually. These data—along with growth in majors in other environmentally-relevant programs at UL Lafayette and throughout the state in Biology, Geology, and Chemistry—will provide a rich pipeline for graduate students to join our MS degree program in Environmental Resource Science.

One of our initial recruiting strategies will be to contact all current Environmental Science programs that offer BS degrees in the Gulf Coast region as well as to use online recruitment platforms such as GradSchoolMatch.com to engage directly with prospective applicants. We will also use the GRE exam service to conduct a highly geo-targeted search to identify prospective applicants who have demonstrated graduate-level readiness through their GRE test performance and identified disciplinary interests that align with the program. Finally, these tools, along with others such as the McNair Scholars Directory, will be used to do targeted outreach to a diverse applicant pool. In addition to these efforts, we will continue to work with the Graduate School to build a social media and web-based recruitment initiative that effectively uses search engine optimization tools to drive inquiries to the program.
Project enrollment and productivity for the first 5 years, and explain/justify the projections.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrolled</th>
<th>New Students</th>
<th>Graduated</th>
<th>Industry-Funded</th>
<th>Self-Funded</th>
<th>Research-Funded</th>
<th>Graduate Assistantships</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>10</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>12</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>21</td>
<td>13</td>
<td>10</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

Based on the analysis of enrollment patterns for similar programs, the enrollment projections in Table 5 are quite conservative. The most recent MS degree program that is related to Environmental Science that was created in Louisiana (2002) is the program in “Environmental and Chemical Science” at McNeese State University. Although this program has a CIP code of 40.0599, which places it in the “Chemistry” category, it is still a reasonable comparison for enrollment because of its focus on Environmental Chemistry. Enrollments in McNeese State’s MS program reached 33 students in just 3 years.

Provide enrollment/completer data for closely related programs currently offered at the institution.

UL Lafayette’s undergraduate programs in Chemistry, Geology, Environmental Science, and Biology, and our MS degree program in Geology are most closely related to the proposed program in Environmental Resource Science. Enrollment statistics for these programs are compiled from 2011 through 2015 in Table 6 and graduation data are presented in Table 7. Note that UL Lafayette’s undergraduate program in Environmental Science began in 2012 and the first students graduated from the program in 2014. The program has grown rapidly, reaching 73 students in Fall 2015. We expect to graduate 10 students from this program in May 2016.

<table>
<thead>
<tr>
<th>Semester</th>
<th>SP11</th>
<th>FA11</th>
<th>SP12</th>
<th>FA12</th>
<th>SP13</th>
<th>FA13</th>
<th>SP14</th>
<th>FA14</th>
<th>SP15</th>
<th>FA15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>621</td>
<td>793</td>
<td>689</td>
<td>779</td>
<td>648</td>
<td>791</td>
<td>654</td>
<td>784</td>
<td>648</td>
<td>812</td>
</tr>
<tr>
<td>Chemistry</td>
<td>149</td>
<td>212</td>
<td>159</td>
<td>174</td>
<td>152</td>
<td>167</td>
<td>143</td>
<td>161</td>
<td>130</td>
<td>169</td>
</tr>
<tr>
<td>Geology</td>
<td>56</td>
<td>67</td>
<td>63</td>
<td>85</td>
<td>80</td>
<td>89</td>
<td>91</td>
<td>89</td>
<td>90</td>
<td>103</td>
</tr>
<tr>
<td>Environmental Sci</td>
<td>NA</td>
<td>NA</td>
<td>22</td>
<td>31</td>
<td>37</td>
<td>52</td>
<td>57</td>
<td>66</td>
<td>55</td>
<td>73</td>
</tr>
<tr>
<td>Geology MS</td>
<td>44</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>66</td>
<td>64</td>
<td>69</td>
<td>72</td>
<td>88</td>
</tr>
</tbody>
</table>

Table 7. Degrees Awarded by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Biology</th>
<th>Chemistry</th>
<th>Geology</th>
<th>Environmental Sci</th>
<th>Geology MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010/11</td>
<td>71</td>
<td>18</td>
<td>17</td>
<td>NA</td>
<td>8</td>
</tr>
<tr>
<td>2011/12</td>
<td>64</td>
<td>16</td>
<td>16</td>
<td>NA</td>
<td>11</td>
</tr>
<tr>
<td>2012/13</td>
<td>75</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>2013/14</td>
<td>87</td>
<td>18</td>
<td>23</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>2014/15</td>
<td>81</td>
<td>24</td>
<td>8</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>5 year Ave</td>
<td>75.6</td>
<td>18</td>
<td>11.8</td>
<td>NA</td>
<td>10.4</td>
</tr>
</tbody>
</table>

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

Prerequisites for acceptance into the MS Program of Environmental Resource Science include a Bachelor’s degree in a related scientific or engineering field. Substitutions may apply and will be determined on a case-by-case basis by the Environmental Science graduate committee.

*LA BoR – Program Proposal*
For admission in good standing, applicants will be expected to demonstrate proof of undergraduate degree with at least a 2.75 cumulative undergraduate GPA or a 3.0 cumulative GPA in the last 60 hours, a satisfactory GRE score, and three supportive letters of recommendation. International students must demonstrate satisfactory English proficiency.

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

UL Lafayette will initially support four masters-level graduate teaching assistantships for this program, which include monthly stipends as well as tuition waivers. Two assistantships will be made available for the first year of the program, and two additional assistantships will be granted for the second year, for a total of 4 assistantships henceforth. As the program grows beyond initial projections (Table 5), the additional tuition revenue may support additional assistantships.

Graduate assistantships are awarded annually by the Graduate School to individual graduate degree programs. There are a significant number of graduate assistantships awarded to Masters students (e.g., in FA2016, the Graduate School funds 286 GTA/GRA/GA positions that Masters students fill; in AY2015-16 and AY2014-15, that number was 284 and 246 respectively). Assistantship allocations vary greatly by graduate degree program, and these allocations are reviewed annually with requests to increase the number of assistantships awarded being evaluated with significant consideration given to enrollment increases and, in the instance of GTA appointments, undergraduate teaching demands. Additionally, a significant number of graduate assistantships are funded by external research funding. Indeed, the Office for Research provides incentives for including graduate student funding in such proposals. In this instance, it is the University’s expectation that, in addition to the graduate assistantships funded by the Graduate School (and increased as enrollment levels support), a significant percentage of the students funded as GRAs will be supported by the faculty’s external research funding and industry-funded initiatives. Whatever the source of funding, the University has established a minimum stipend level for both master’s-level and doctoral-level assistantship stipends and has established definitions to distinguish the difference between GTA/GRA/GA appointments. UL Lafayette is committed to supporting the growth of this new program by regularly assessing its need for additional assistantships, and providing additional resources should they become necessary to the wellbeing of the program.

Graduate assistantships are important for recruiting and retaining highly qualified students. Graduate assistantships also help to offset faculty workloads, which are expected to increase with the inception of a graduate program. The cost of the requested four assistantships will be offset by in-state and out-of-state tuition revenue from full-time students enrolled in the program as well as internship support from local industry.

In addition to the four graduate assistantships requested from UL Lafayette, many students will be funded by external research funds and by industry partners, either through the creation of company-sponsored assistantship, paid internships, or corporate funding as a business-recruiting tool for graduates. We estimate that faculty research funding will support between 1 and 6 graduate students annually. This is based on the fact that faculty in the School of Geosciences have averaged (as a group) almost $800,000 a year in external research funding over the last 5 years. Furthermore, a number of businesses and agencies have already committed to hosting internships for our students. We further estimate that paid internships will be provided to as many as 7 students annually. Organizations that have committed to providing internships include the following:

- RT Environmental Services
- Sherry Laboratories
- Hydro-Environmental Technology Inc.
- T. Baker Smith, LLC
- Icon Environmental Services
- KourCo Environmental Services
- Stokes and Spiehler Engineering and Consulting
- CH2M Hill
- Dove Environmental
- Lafayette Consolidated Government
- US Department of Agriculture – National Resources Conservation Service
- National Park Service
- Louisiana Department of Environmental Quality
Finally, our experience is that some students are willing to pay out of pocket for a valuable MS degree that puts them on a path to a high-paying job, leadership positions, and/or other forms of professional advancement. Hence, through the combination of funding mechanisms, including graduate assistantships, paid internships, research assistantships, and self-funding, we can easily reach our enrollment projections (Table 5).

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

Primary Faculty are listed below, all with doctoral degrees and the appropriate graduate faculty status (see Table 1 for listing of courses these faculty can/will teach within the proposed degree program)
• Dr. Durga Poudel; Professor, Environmental Science
• Dr. Jenneke Visser; Associate Professor, Environmental Science
• Dr. Katie Costigan; Assistant Professor, Environmental Science
• Dr. Aubrey Hillman; Assistant Professor, Environmental Science
• Dr. Brian Schubert; Assistant Professor, Geology
• Dr. Carl Richter; Professor, Geology
• Dr. David Borrok, Professor, Geology. Borrok is also the Director of the School of Geosciences.
• Dr. Tim Duex, Associate Professor, Geology

Supporting faculty from other disciplines with doctoral degrees and appropriate graduate faculty status
• Dr. Paul Leberg; Professor, Biology
• Dr. Mark Hester; Professor, Biology
• Dr. Paul Kleris; Professor, Biology
• Dr. Emad Habib; Professor, Civil Engineering
• Dr. Daniel Gang; Professor, Civil Engineering
• Dr. Feebe Louka; Associate Professor, Chemistry
• Dr. Radhey Srivastava, Professor, Chemistry

Adjunct Faculty: Adjuncts will help to support research, teaching, and in some cases can serve on graduate thesis committees.
• Dr. Thomas Doyle – PhD; US. Geologic Survey, National Wetlands Research Center
• Dr. Ken Krauss – PhD; US. Geologic Survey, National Wetlands Research Center

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 program will be taught by current faculty (see previous question).

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.
The School of Geosciences already has in place a highly-structured framework for teaching load decisions, as per research, extension, and other activities. All new faculty who teach at the Graduate level are required to hold a terminal degree, and must demonstrate success with their research, teaching, and service.

Scholarly activity within the School of Geosciences is high and capable of supporting multiple graduate students within this program. Over the last 5 years, the School has averaged $760,000 in new external research funding annually. The addition of 4 graduate assistants to support this program will allow us to effectively offset increased teaching loads and maintain an already high level of research productivity.
5. Library and Other Special Resources
Are present library holdings in related fields adequate to initiate the program? To meet program needs in the first 5 years, what will be needed? Do other institutions have library resources available to faculty & students for the proposed program?

Present library holdings in the related fields of Geology, Environmental Science, Biology, and Chemistry are adequate to initiate the Master of Science in Environmental Resource Science. The library supports instruction and research with collections in a variety of formats. The library provides electronic access to materials through the library's website.

Other institutions' resources are available to faculty and students for the Master of Science in Environmental Resource Science through Interlibrary Loan and LOUIS: The Louisiana Library Network. The library participates in formal arrangements in order to supplement the collections owned by the library. This includes participation in LOUIS: The Louisiana Library Network, a consortium that allows Louisiana academic libraries to share library resources, collaboratively purchase resources, and extend borrowing privileges across the state. Through the library's membership in LOUIS, students and faculty may obtain a LOUIS card and borrow materials directly at all of the colleges and universities throughout the State of Louisiana.

Indicate/estimate total expenditure for the last two fiscal years in library acquisitions for fields or departments offering or related to the proposed program.

<table>
<thead>
<tr>
<th>Total Library Expenditures 2014/2015 and 2015/2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print and Electronic Serials Subscriptions: $563,441.75</td>
</tr>
<tr>
<td>Online Research Databases (includes LOUIS Consortium Membership): $991,478.15</td>
</tr>
<tr>
<td>Print and Electronic Books: $49,005.00</td>
</tr>
</tbody>
</table>

Project library expenditures needed for the first 5 years of the program.

| No additional library expenditures are anticipated. |

What additional special resources, other than library holdings, will be needed?

| There are no anticipated additional special resources, other than library holdings, needed. |

6. Facilities and Equipment
Describe existing facilities (classrooms, labs, offices, etc.) available for the program. Describe present utilization of these facilities that are assigned to the sponsoring department.

The MS in Environmental Resource Science will be housed within the School of Geosciences in Hamilton Hall. Seven classroom spaces, totaling almost 7,000 ft² and accommodating 491 students, are available for lectures in Hamilton Hall. This includes a 236-person auditorium, which can be used for large classes and our graduate seminar series. An additional 4,200 ft² of laboratory teaching space is available for "hands-on" laboratory-based courses. Every faculty member and instructor in the School of Geosciences has office space on the 3rd floor of Hamilton Hall. Several additional offices are available to accommodate further expansion. Laboratory research space in Hamilton Hall includes two large (>1,000 sq ft) rooms in the basement (B08/B09). These include extensive bench space, available gas, vacuum and air lines, fume hoods, and wireless internet access. Additional research laboratory space on the 2nd floor is dedicated to geochemical investigations, including isotope ratio mass spectrometry.

The School of Geosciences also manages the Ira Nelson Horticulture Center and Cade Farm, which function as off-campus research and education facilities. The UL Lafayette Research Farm at Cade is located in St. Martin Parish and consists of 600 acres of wetland research ponds, pasture lands, agricultural lands, and wetland habitat. The Welcome Center building includes a large classroom that can accommodate up to 75 people. The Ira Nelson Horticulture Center is an instructional horticulture and experimental laboratory facility designed to educate students and the community. The center consists of 16,763 sq. ft. of greenhouses, 4,668 sq. ft. of shade houses, and 7,030 sq. ft. of offices, classrooms, laboratories, and storage. In addition to these facilities, the Center for Ecology and Environmental Technology (CEET) offers greenhouse and field research space for students and faculty.
Many of the School of Geosciences' GIS courses are housed in the GIS regional application center in Abdalla Hall on the UL Lafayette Research Campus. This facility is available to support our proposed program.

The Geology Museum facility, located within the Lafayette Science Museum in downtown Lafayette, Louisiana, contains a 1,500 sq ft research space in addition to a federally-certified specimen repository. This facility will be available for students and faculty doing paleoenvironmental work with water and soils.

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.

No new facilities or equipment are anticipated, as the Master's degree in Environmental Resource Science will leverage such resources as they already exist.

7. Administration
In what department, division, school, college, or center/institute will the proposed program be administered? How will the new program affect the present administrative structure of the institution?

The Master's degree in Environmental Resource Science shall be administered by the School of Geosciences in the Ray P. Authement College of Sciences. The new program will have no impact on the present administrative structure of the institution.

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

The proposed program in Environmental Resource Science is closely tied to the mission of the School of Geosciences to provide maximum value to our students, our community, and society through education and research focused on Energy and the Environment. Our faculty includes world-class experts in the areas of water and soil research. The creation of this program will provide new graduate-level opportunities for our undergraduate students and will provide another avenue for research and collaboration among our faculty. This is critically important for our faculty members who are associated with our undergraduate program in Environmental Science. These faculty members will now have the opportunity to direct graduate students in the Environmental Resource Science program. The ability to work with graduate students will substantially enhance their research productivity, strengthening the School of Geosciences as a whole.

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.

There currently is no existing program accreditation body for this discipline.

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.

Consultants were not used for the development of this proposal.

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

Because the proposed program in Environmental Resource Science is interdisciplinary in nature, students with undergraduate degrees in Chemistry, Biology, Civil Engineering, Environmental Science, and Geology will have the academic background necessary for admission into the program. Moreover, faculty from these various disciplines will be directly involved in our program through research, mentorship, and teaching. We plan to leverage courses that are already being routinely taught, so changes in teaching loads will be minimal. Faculty from any of these disciplines can serve as thesis advisors and/or committee members for student research projects.

In summary, the MS degree program in Environmental Resource Science will provide new and exciting educational opportunities for a large pool of students, and it will catalyze interdisciplinary collaboration and research productivity at the University of Louisiana at Lafayette.
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 proposed program can be fully implemented with little new costs to UL Lafayette. This includes no new additional funds required for faculty, supplies, operating expenses, or travel. Costs incurred by graduate assistantships represent a minimal but necessary investment and will be matched by industry-supported internships and offset by tuition revenue.

*On the separate budget form, estimate new costs and revenues for the projected program for the first four years, indicating need for additional appropriations or investment by the institution.

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.

Faculty in the School of Geosciences have averaged $760,000 in external grant/contract funding annually over the last 5 years (see graphic below). This level of funding can be split between UL Lafayette's existing MS degree program in Geology and the proposed MS-degree program in Environmental Resource Science to support a large number of graduate students.

![New research funding in the School of Geosciences annually from 2011 to 2015](chart)

CERTIFICATIONS:

Dr. Azmy Ackleh, Dean of the Ray P. Authement College of Sciences
Primary Administrator for Proposed Program

Date: May 23, 2016

Dr. Fabrice Leroy, Assistant Vice President for Academic Programs
On behalf of Provost/Chief Academic Officer

Date: May 23, 2016

Management Board/System Office

Date
SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR INTENDED PROGRAM

Institution: University of Louisiana at Lafayette  Date: February 1, 2016

Degree Program, Unit: M.S. in Environmental Resource Science, School of Geosciences, College of Science

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

<table>
<thead>
<tr>
<th>EXPENDITURES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INDICATE ACADEMIC YEAR:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>FIRST</strong></td>
<td><strong>SECOND</strong></td>
</tr>
<tr>
<td><strong>AMOUNT</strong></td>
<td><strong>FTE</strong></td>
</tr>
<tr>
<td>Faculty</td>
<td>$0</td>
</tr>
<tr>
<td>Graduate Assistants</td>
<td>$46,132</td>
</tr>
<tr>
<td>Support Personnel</td>
<td></td>
</tr>
<tr>
<td>Fellowships and Scholarships</td>
<td></td>
</tr>
<tr>
<td><strong>SUB-TOTAL</strong></td>
<td>$46,132</td>
</tr>
</tbody>
</table>

|  |  |
| **AMOUNT** | **AMOUNT** | **AMOUNT** | **AMOUNT** |
| Facilities | $0 | 0 | 0 | 0 |
| Equipment | 0 | 0 | 0 | 0 |
| Travel | 0 | 0 | 0 | 0 |
| Supplies | 0 | 0 | 0 | 0 |
| **SUB-TOTAL** | $0 | 0 | 0 | 0 |
| **TOTAL EXPENSES** | $46,132 | 92,264 | $92,264 | 92,264 |

|  |
| **REVENUES** |  |
| Revenue Anticipated From: |  |
| *State Appropriations | $27,093** | $54,186** | $75,860** | $97,534 |
| *Federal Grants/Contracts | 0 | 0 | 0 | 0 |
| *State Grants/Contracts | 0 | 0 | 0 | 0 |
| *Private Grants/Contracts | 0 | 0 | 0 | 0 |
| Expected Enrollment | 5 | 10 | 14 | 18 |
| Tuition | $16,532 | $33,063 | $55,106 | $77,148 |
| Fees | $7,201*** | $14,402*** | $24,003*** | $33,604*** |
| Other (specify) |  |
| **TOTAL REVENUES** | $50,826 | $101,651 | $154,969 | $208,286 |

**Used 2016-7 new formula (without OPM) to estimate state appropriations

***Undedicated fees only
Dr. Karen Denby  
Associate Commissioner for Academic Affairs  
State of Louisiana Board of Regents  

September 28, 2016  

Dear Dr. Denby,

Please find, attached, the revised proposal for UL Lafayette’s new Master of Science in Environmental Resource Science (CIP 03.0199). This document takes into account Dr. Scott Wood’s thorough evaluation, which was supportive of the program’s creation but requested the clarification of some elements, as well as the additional concerns that you expressed to Assistant Vice President Ellen Cook in an email dated July 6, 2016.

In regard to the latter queries, this new document further stresses the interdisciplinary nature of this degree program, which coalesces existing courses from the areas of Environmental Science, Geology, Biology, Civil Engineering, and Chemistry. We also demonstrated that each of the combined areas has capacity for additional enrollment to support this program, in order to confirm its feasibility and resource neutrality (pgs. 1 & 2).

On the subject of assistantships, we also offered the following explanation (pg. 14):

"UL Lafayette will initially support four masters-level graduate teaching assistantships for this program, which include monthly stipends as well as tuition waivers. Two assistantships will be made available for the first year of the program, and two additional assistantships will be granted for the second year, for a total of 4 assistantships henceforth. As the program grows beyond initial projections (Table 5), the additional tuition revenue may support additional assistantships.

Graduate assistantships are awarded annually by the Graduate School to individual graduate degree programs. There are a significant number of graduate assistantships awarded to Masters students (e.g., in FA2016, the Graduate School funds 286 GTA/GRA/GA positions that Masters students fill; in AY2015-16 and AY2014-15, that number was 284 and 246 respectively). Assistantship allocations vary greatly by graduate degree program, and these allocations are reviewed annually with requests to increase the number of assistantships awarded being evaluated with significant consideration given to enrollment in/decreases and, in the instance of GTA appointments, undergraduate teaching demands. Additionally, a significant number of graduate assistantships are funded by external research funding. Indeed, the Office for Research provides incentives for including graduate student funding in such proposals. In this instance, it is the University's expectation that, in addition to the graduate assistantships funded by the Graduate School (and increased as enrollment levels support), a significant percentage of the
students funded as GRAs will be supported by the faculty’s external research funding and industry-funded initiatives. Whatever the source of funding, the University has established a minimum stipend level for both master’s-level and doctoral-level assistantship stipends and has established definitions to distinguish the difference between GTA/GRA/GA appointments. UL Lafayette is committed to supporting the growth of this new program by regularly assessing its need for additional assistantships, and providing additional resources should they become necessary to the wellbeing of the program.

Graduate assistantships are important for recruiting and retaining highly qualified students. Graduate assistantships also help to offset faculty workloads, which are expected to increase with the inception of a graduate program. The cost of the requested four assistantships will be offset by in-state and out-of-state tuition revenue from full-time students enrolled in the program as well as internship support from local industry.

In addition to the four graduate assistantships requested from UL Lafayette, many students will be funded by external research funds and by industry partners, either through the creation of company-sponsored assistantship, paid internships, or corporate funding as a business-recruiting tool for graduates. We estimate that faculty research funding will support between 1 and 6 graduate students annually. This is based on the fact that faculty in the School of Geosciences have averaged (as a group) almost $800,000 a year in external research funding over the last 5 years. Furthermore, a number of businesses and agencies have already committed to hosting internships for our students. We further estimate that paid internships will be provided to as many as 7 students annually."

I hope that this revised proposal provides satisfactory answers to the questions that the external review process brought to our attention. The faculty of the UL Lafayette College of Sciences, the Deans of the College of Sciences and the Graduate School, Provost Danahar and the Academic Affairs leadership, and President Savoie have full confidence in the strength and eventual success of this program, and are looking forward to its implementation.

Sincerely,

[Signature]

Dr. Fabrice Leroy
Assistant Vice President for Academic Affairs/Academic Programs

A Member of the University of Louisiana System
Item E.7. University of Louisiana at Lafayette’s request for approval to award an Honorary Doctorate in Systems Engineering to Mr. Don Mosing at the Fall Commencement Exercises.

EXECUTIVE SUMMARY

The University of Louisiana at Lafayette requests approval to award an Honorary Doctorate in Systems Engineering to Mr. Don Mosing at the Fall Commencement Exercises. Mr. Mosing is a 1950 graduate of Southwestern Louisiana Institute of Liberal and Technical Learning (now University of Louisiana at Lafayette); he earned a Bachelor of Science degree in Mechanical Engineering. For more than 20 years Mr. Mosing served as the CEO of Franks International. Under his leadership, Franks International grew from a local casing company in Lafayette, Louisiana to an international oilfield technology giant with a huge market share.

Mr. Mosing can be credited with the rise of Franks International because of the numerous technological breakthroughs in petroleum equipment that were directly developed by him. Over Mr. Mosing’s career, he charted the company’s technological development through prototyping and then field testing and eventually into full market entry. A legendary hallmark for Mr. Mosing are the many novel solutions he developed within in-field settings for solving unique and complex problems challenging the petroleum resource industry.

A strong supporter of UL-Lafayette, Mr. Mosing’s first employee was a UL-Lafayette Mechanical Engineering graduate. Currently, there are 50 UL-Lafayette graduates at the company, the majority of whom have an engineering degree. As well, Mr. Mosing has supported a variety of University projects, such as the Department of Mechanical Engineering’s participation in the 2016 Maritime RobotX Challenge, the acquisition of a water jet cutting machine, and a number of projects involving varsity sports teams and facilities.

Mr. Mosing’s other notable achievements include receiving the Louisiana Gulf Coast Oil Exposition Looey Award for 1997-1999 and the World Oil Magazine’s Lifetime Achievement Award in 2011. Also, he has 40 patents with the most recent being issued within the past month. The University would like to recognize his contributions by awarding him this honorary doctorate.
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 to award an Honorary Doctorate in Systems Engineering to Mr. Don Mosing at the Fall Commencement Exercises.
October 6, 2016

Dr. Daniel D. Reneau, Jr.
Interim President
University of Louisiana System
1201 North Third Street, Suite 7-300
Baton Rouge, LA 70802

Dear Dr. Reneau:

I write to ask for approval to award an Honorary Doctorate in Systems Engineering to Mr. Donald Mosing at the University of Louisiana at Lafayette's fall commencement ceremonies to be held on December 16, 2016. Documents related to this recommendation are attached.

Please place this item on the agenda for consideration at the October 2016 meeting of the Board of Supervisors.

Sincerely,

E. Joseph Savoie
President

Attachments
On behalf of the faculty of the College of Engineering, I recommend the awarding of an honorary doctorate in Systems Engineering to Mr. Donald Mosing during the Fall, 2016 Commencement Ceremony. Mr. Mosing has a BS degree in Mechanical Engineering from SLI. As an aside, he also played lineman for the SLI football team during his time here. In 2014, Mr. Mosing retired from Franks International after serving as CEO for more than 20 years. His pioneering approach to oilfield technology development has positioned him as an engineer of great worldwide acclaim and as someone of whom our college is very proud to call an alumnus.

Under his leadership, Franks International grew from a local casing company in Lafayette, LA to an international oilfield technology giant with a huge market share. A key part of this rise of the company is based on the numerous technological breakthroughs in petroleum equipment development. Many of these were directly developed by Mr. Mosing inclusive of the awarding of 40 US patents to him. The ability to utilize science toward problem solving, the design equipment prototypes, and then the ability to commercialize concepts into marketable technology is the hallmark of a successful engineer. Mr. Mosing clearly is a very successful engineer.

Over his 30+ years of a stellar career, Mr. Mosing chartered the company’s technological developmental paths, hired and mentored many successful engineers, and led technology development through prototyping then field testing, and eventually into full market entry. A legendary hallmark of Mr. Mosing is his many novel solutions he developed within in-field settings for solving unique and complex problems challenging the petroleum resource industry as new drilling challenges and well conditions emerged.
A PhD degreed engineer is one that uses basic knowledge to better our technology base – Mr. Mosing clearly fits this description and is very deserving of being awarded an Honorary PhD in Systems Engineering. In closing, I am hopeful that you will grant this request to someone who is earned this great honor from an institution that he loves so much.

A comprehensive biography of Mr. Mosing for your review is presented below:

In 1950, Donald Mosing graduated from the University of Louisiana Lafayette, known at that time as the Southwestern Louisiana Institute of Liberal and Technical Learning, with a Bachelor of Science degree in Mechanical Engineering. While at SLI, Donald also lettered in Football and Track & Field.

After graduation, Donald went back to work for the company he had been employed at since he was 14, Frank's Casing Crew & Rental Tools, Inc., an oilfield services company his father, Frank Mosing, founded in 1938 along with Mr. Frank's "secret weapon," Mrs. Jessie Mosing, to "run casing" in connection with the drilling of oil and gas wells. The company was started here in Lafayette on a shoestring budget and a leap of faith. The first casing jobs were run out of the Mosing home located off Moss Street.

Donald, the eldest of the Mosings' three sons, unofficially started working for Frank's in 1943. Frank's was short-staffed during World War II, and Donald was cheap labor. In 1950, with several casing jobs under his belt and a freshly-minted engineering degree from SLI, Donald became a paid Frank's employee. He became President in 1989, and retired in 2011.

Along the way, Donald worked in every aspect of the company's operations, from casing hand to the executive suite, from flying a float plane to call on customers in the bayous to designing and managing the manufacture of the company's oilfield tubulars handling equipment. Today, Frank's International, N.V., as the company is now known, is a publicly-traded company with 3000 employees in 40 locations across the US and around the world.

Donald has 40 patents, the most recent of which issued within the past month. He was honored with the Louisiana Gulf Coast Oil Exposition (“LAGCOE”) Looey Award for 1997-1999, and in 2011, he received World Oil Magazine's Lifetime Achievement Award.

The first employee Donald was responsible for hiring at Frank's was a UL Mechanical Engineering graduate, and since that time Donald and the company have relied on UL for many of its employees. Today, there are 50 UL graduates at the company, the majority of whom have an engineering degree.

As well as being an employer of UL graduates, Donald has been a generous financial benefactor. Since 2012, he has given $7 million to the University in support of the College of Engineering and the athletics department. He has funded the Donald and Janice Mosing/Board of Regents Endowed Chair in Mechanical Engineering, currently held by Dr. Terry Chambers; the Frank and Jessie Mosing Endowed Engineering Student Career Development Program, in honor of his parents; and the Frank's Computer Aided Design Laboratory in Rougeau Hall, which features state-of-the-art CAD computers and software to train 400 students each year. He has endowed four scholarships, in the names of each of his four children, Keith, Greg, Brad and
Melanie. He has supported a variety of University projects, such as the Department of Mechanical Engineering’s participation in the 2016 Maritime RobotX Challenge, the acquisition of a water jet cutting machine, and a number of projects involving varsity sports teams and facilities.
Item E.8. University of Louisiana at Monroe’s request for one-year conditional approval of the ULM Environmental Education and Research Center.

EXECUTIVE SUMMARY

The University of Louisiana at Monroe (ULM) requests one-year conditional approval of the ULM Environmental Education and Research Center (ULM-EERC), a new group that will operate at the former LSU AgCenter Calhoun Research Station, east of Calhoun in Ouachita Parish, Louisiana (a 329-acre site with two ponds and several small seasonal stream channels). The mission of the ULM-EERC will be to establish onsite research into clean water technology, using Louisiana’s natural wetlands; develop an interest in STEM careers among students living in Ouachita Parish; and promote economic development with Ouachita Parish. Methods will be tested and developed using native wetland plants and constructed filtering systems to reduce pollution from treated wastewater facilities and agricultural runoff. Objectives include:

- Provide a research site to help understand and improve wetland use;
- Provide a center for environmental education of area K-12 schools;
- Provide onsite demonstrations for students to learn about water quality monitoring, the effects of pollution, methods to reduce pollution, and the protection of Louisiana’s valuable water resources;
- Implement place-based and experiential learning and research opportunities for students; and
- Build capacity for school teachers in STEM disciplines.

Northpoint Source (NPS) pollution is one of the major categories that needs to be addressed in order to improve water quality within the State of Louisiana. The Louisiana Department of Environmental Quality (LDEQ) Water Quality data indicates that one-half to three-quarters of Louisiana’s rivers, lakes and other water bodies are affected in some way by NPS pollution. One major problem with NPS pollution is an increase in suspended sediments, nutrients and organic matter (sewage) that enter waterbodies during rain events. Runoff from agricultural fields, urban areas, and construction sites can carry away soil, producing turbid or cloudy water which can reduce the penetration of sunlight that bottom-dwelling plants in lakes and bayous need to survive. Such plants, called submerged aquatic vegetation, are critical for the ecosystem functioning because they provide a habitat for aquatic organisms, produce oxygen and trap sediment. Innovative techniques are needed to address these issues at micro and macro scales in order to improve water quality. The proposed Center can provide onsite research using both constructed and natural wetlands with various combinations of treatment processes to improve municipal wastewater and agricultural and storm water runoff as well as water quality in recreationally-important waterbodies such as Lake Cheniere.
In addition to the research initiatives noted the ULM-EERC will strive to improve on STEM education in the region, especially among socioeconomically disadvantaged students. The proposed Center aims to promote the concepts of “place-based education” in middle school students. Additionally, the ULM-EERC will serve as a much needed resource center for area science teachers who will collaborate with ULM faculty and develop “tailored” lessons that are more appropriate for their particular location. One potential highlight of the proposed Center is the development of a science “exploratorium” for middle and high school students – an area where teachers from local schools can take students on field-trips and enable them to “interact with science and nature” within an experiential framework. All of these interactive and engaging activities will create awareness and appreciation among students through a transformative educational experience that will help them become informed citizens as well as potentially spark interest in STEM as an educational pathway.

ULM has entered into an Interagency Agreement with the Ouachita Parish Police Jury to secure and occupy the 329-acre site. Five ULM faculty (from the Colleges of Arts, Education and Sciences and Health and Pharmaceutical Sciences) will initially be affiliated with the proposed Center. Oversight of the proposed Center will be provided by two Co-Directors; no significant change in administrative structure will occur with the creation of the Center.

The projected cost of Center activities include undergraduate student support, materials and supplies, and analytical lab provisions totaling an estimated $10K for Year One. Funding of the ULM-EERC will be done incrementally; start-up funding will be provided through a reserve account of ULM’s Office of Academic Affairs. Future funding sources will be grants and contracts from agencies/entities such as the U.S. Fish and Wildlife Services, Louisiana Systemic Initiatives (LaSIP), EPA Environmental Education (EE) and Wetland Program Development Grants, etc. Affiliated faculty, along with partners and consultants involved with the ULM-EERC, are already working with personnel within the agricultural and business sectors to locate funding sources and explore solutions to environmental pollution problems, especially those concerning surface waters. In addition, faculty have contacted and gained support from area school administrators and science teacher who will collaborate with ULM to develop “tailored” lessons.

**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 Monroe’s request for one-year conditional approval of the ULM Environmental Education and Research Center.**
October 3, 2016

Dr. Daniel C. Reneau
Interim President
University of Louisiana System
1201 North Third Street, Suite 7-300
Baton Rouge, LA 70802

Dear Dr. Reneau:

The University of Louisiana at Monroe (ULM) respectfully requests approval of the Environmental Education and Research Center (EERC), a new group that will operate at the former LSU AgCenter Calhoun Research Station. The proposal attached is submitted for consideration by the University of Louisiana Board of Supervisors and, once approved, forwarded to the Louisiana Board of Regents.

Work begun at the EERC has already involved faculty and students from our unmanned aircraft systems, biology, and toxicology programs. The advisory board formed to assist in the development of projects at the site involves ULM faculty, state and local government representatives, and industry personnel, so I fully expect it will not only improve STEM research and education but will benefit the region by assisting municipalities and companies address the important questions they face with regard to the availability of clean surface water. I further expect that the EERC will increase economic development as the intellectual property generated through research is used for commercial purposes.

I am quite excited by the possibilities that exist for the EERC and trust that our proposal will be approved.

Sincerely,

[Signature]
Nick J. Bruno, Ph.D.
President

Enclosure

xc   Eric Paris
Form A

Request for Conditional (One-Year) Approval of a New Academic/Research Unit

PLEASE SUBMIT ONE PRINTED AND ONE ELECTRONIC COPY (Email attachment, Word/Word Perfect Document – no PDFs please) including:

1. Name of Institution: University of Louisiana at Monroe

2. Name of Proposed Unit: ULM Environmental Education and Research Center (ULM-EERC)

3. Name and Title of Administrator (including contact information – email, phone, etc.): Dr. Joydeep Bhattacherjee, Associate Professor of Biology, joydeep@ulm.edu, 318-342-1946; Dr. Kevin Baer, Professor of Toxicology, baer@ulm.edu, 318-342-1698

4. Department or Academic Unit Responsible for the Unit: College of Arts, Education, and Sciences, School of Sciences, Biology; College of Health and Pharmaceutical Sciences, School of Pharmacy, Toxicology

5. Date to Be Implemented: January 2017

6. Date Approved by Management Board:

FORM A – PROPOSAL FORMAT

Part I – Description

A. Provide a description and set of objectives for the proposed unit.

The ULM Environmental Education and Research Center (ULM-EERC) will comprise of a multi-disciplinary education and research team located at the former Louisiana State University AgCenter Calhoun Research Station, east of Calhoun in Ouachita Parish, Louisiana. The mission of the ULM-EERC will be to establish onsite research into clean water technology using Louisiana's natural wetlands, develop an interest in STEM careers among students living in Ouachita Parish, and promote economic development within Ouachita Parish. Methods will be tested and developed using native wetland plants and constructed filtering systems to reduce pollution from treated wastewater facilities and agricultural runoff. Objectives include:

- Provide a research site to help understand and improve wetland use;
- Provide a center for the environmental education of area K-12 schools;
- Provide onsite demonstrations for students to learn about water quality monitoring, the effects of pollution, methods to reduce pollution, and the protection of Louisiana's valuable water resources;
- Implement place-based and experiential learning and research opportunities for students; and
- Build capacity for school teachers in STEM disciplines.
B. Correlate objectives of the proposed unit with the role, scope, and mission of the institution.

The ULM-EERC is consistent with ULM's role as a teaching and research university, its mission to successfully educate undergraduate and graduate students, and deliver services that support economic development, especially to employers and communities in its region. It helps the university:

- Develop technology to clean surface water and serve regional municipalities, agricultural producers, and residential communities seeking assistance;
- Conduct applied research related to improving water quality;
- Offer environmental research opportunities to undergraduate and graduate students;
- Develop an interest in STEM careers among students living in the region;
- Promote the concepts of "place-based education" in middle school students; and
- Develop intellectual property resulting from research at the site that, through the transfer of technology, will promote economic development in the region.

C. Address how the proposed unit will work with the local/regional economic development alliance to explore potential opportunities for collaboration.

The University of Louisiana at Monroe has entered into an Interagency Agreement with the Ouachita Parish Policy Jury to secure and occupy the 329-acre site (see Part IV for site description) then referenced as the Center for Clean Water Education and Technology but hereafter referred to as the EERC. Faculty, partners, and consultants involved with the EERC are already working with personnel within the agricultural and business sectors to locate funding sources and explore solutions to environmental pollution problems, especially those concerning surface waters. A direct economic benefit to the region will come from more efficient treatment technologies developed through the research efforts at the Center. In addition, faculty have contacted and gained support from area school administrators and science teachers who will collaborate with ULM to develop "tailored" lessons that are aligned with state and national standards and are more appropriate for their site-specific needs. The Center will also serve as a venue for community and governmental agency (e.g., District Soil and Water Conservationists, Louisiana Department of Agricultural and Forestry, etc.) workshops and continuing education classes. Other opportunities include providing certification programs for agricultural producers and municipal workers.

Part II – Need

A. Provide a rationale of need for the proposed unit.

Nonpoint Source (NPS) Pollution is one of the major categories that needs to be addressed in order to improve water quality within the State of Louisiana. The Louisiana Department of Environmental Quality (LDEQ) Water Quality data indicates that one-half to three-quarters of Louisiana's rivers, lakes, and other water bodies are affected in some way by NPS pollution. In an effort to reduce NPS pollution and improve water quality, LDEQ utilizes a Watershed Implementation Strategy aimed at reducing sediments, nutrients, pesticides, and bacteria that contaminate the state's waters. One major problem with nonpoint source pollution is an increase in suspended sediments, nutrients, and organic matter (sewage) that enter waterbodies during rain events. Runoff from agricultural fields, urban areas, and construction sites can carry away soil, producing turbid or cloudy water. Soil in the water is termed suspended sediment, and this can reduce the penetration of sunlight that bottom-dwelling plants in lakes and bayous need to survive. Conditions where these plants, called submerged aquatic vegetation (SAV), are deprived of sunlight for extended periods can lead to death and creation of "dead zones". SAV is critical for the ecosystem functioning because they provide a habitat for aquatic organisms, produce oxygen, and trap sediment. Levels of nutrients, such as phosphorus, in state watersheds frequently exceed current water quality guidelines (0.100 mg/L). A recent study found that concentrations of phosphorus above 0.020 mg/L are linked to declines in both water quality and aquatic biota. Excessive nutrient loads in the Gulf
of Mexico are attributed to biological "dead zones". Therefore, innovative techniques are needed to reduce these contaminants in a variety of runoff scenarios at micro and macro scales. Additionally, point source pollution from treated sewage wastewater contributes to poor water quality. The design and use of constructed wetlands with selected SAV can be effectively used as a phytoremediation technique to improve water quality in receiving waters. The proposed project site is a wetland on a 329-acre tract of land in Calhoun, Louisiana that is ideal for the development of clean water technologies. The Center can provide onsite research using both constructed and natural wetlands with various combinations of treatment processes to improve municipal wastewater and agricultural and stormwater runoff and ultimately water quality in recreationally-important waterbodies such as Cheniere Lake. The ultimate goal is to develop a Wetland Enhancement Plan to reduce local pollution. Additionally, other technologies such as plant-based absorbents and novel engineering solutions can be investigated for remediation success of contaminated water, soil, and aquatic sediments.

Another important goal of the EERC that addresses a critical need is to improve on STEM education in the region, especially among socioeconomically disadvantaged students. The Center aims to promote the concepts of "place-based education" in middle school students. This is in connection with current science standards that are in place in school curricula. Additionally, EERC will serve as a much needed resource center for area science teachers who will collaborate with ULM faculty and develop "tailored" lessons that are more appropriate for their particular location. One potential highlight of the EERC is the development of a science "exploratorium" for middle and high school students - an area where teachers from local schools can bring students on field-trips and enable them to "interact with science and nature" within an experiential framework. This is a critical need currently not extensively available in the northeast region of the state. Examples include a butterfly garden, a fully functional greenhouse, and a bio-remediation outdoor experimental pond. In addition, the EERC will create an outdoor lab where students will learn experientially how to use plants to improve water quality and carryout small-scale experiments in clean water technology. There will be a nature trail that will take students through both upland and wetland habitats, where students will be introduced to native plants and trees. These facilities will allow students to learn hands on about the local environment they live in and make connections with nature. All of these interactive and engaging activities will create awareness and appreciation among students through a transformative educational experience that will help them become informed citizens. The EERC is aligned with the Project WET core beliefs, including "Awareness of, and respect for, water resources can encourage a personal, lifelong commitment of responsibility and community participation". Fostering a citizenry that appreciates and shows ownership in Louisiana's rich heritage of natural resources fulfills a critical need for the state.

Part III – Faculty

A. List the primary faculty members who will work directly within the proposed new unit. Please provide vitae (the abbreviated vita form required for a Support Fund Initiative proposal is acceptable).

ULM faculty initially affiliated with the EERC are the following. CVs are attached in Appendix 1.

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>College</th>
<th>School</th>
<th>Expertise</th>
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</thead>
<tbody>
<tr>
<td>Dr. Joydeep</td>
<td>Associate</td>
<td>Arts, Education, and Sciences</td>
<td>Sciences</td>
<td>Plant and restoration ecology</td>
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<tr>
<td>Bhattacharjee</td>
<td>Professor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Kevin Baer</td>
<td>Professor</td>
<td>Health and Pharmaceutical Sciences</td>
<td>Pharmacy</td>
<td>Environmental Toxicology</td>
</tr>
<tr>
<td>Dr. Saswati Majumdar</td>
<td>Adjunct</td>
<td>Arts, Education, and Sciences</td>
<td>Sciences</td>
<td>Curriculum and Instruction</td>
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3
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<tr>
<td>Dr. Kioh Kim</td>
<td>Associate Professor</td>
<td>Arts, Education, and Sciences</td>
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<td>Educational Technology</td>
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<tr>
<td>Dr. Sean Chenoweth</td>
<td>Associate Professor</td>
<td>Arts, Education, and Sciences</td>
<td>Sciences</td>
<td>Remote Sensing, Geographic Information Systems</td>
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</tbody>
</table>

**Part IV – Facilities and Equipment**

A. Briefly describe existing facilities (classrooms, laboratories, offices, etc.) available for the unit.

The EERC is located east of Calhoun in Ouachita Parish, Louisiana and was the former Louisiana State University AgCenter Calhoun Research Station (see Figures 1 and 2). The approximate area of the site is 329 acres with U.S. Highway 80 intersecting east to west. The site contains predominantly upland habitat that is bordered by Curry Creek and Interstate 20 to the north. North Cheneire Creek crosses the research site on the southeast corner. There are two ponds, one on the north end of the property and the other on the south end. To the north, there are several small seasonal stream channels that drain the uplands during the wet seasons. Between these two creek floodplains, the elevation increases near U.S. 80 to 175 feet (above sea level) and then drops to approximately 115 feet at the creek floodplains. Most of the uplands are open grass pasture and lawns that include several buildings (including offices, workshops, and experimental labs; see Figures 1 and 2).

![Figure 1: North end of the property. Site 1 indicates the natural wetland. This area has been identified for engineering stages for phytoremediation experiments. Site 2 indicates a teaching greenhouse. This facility needs to be modified as a teaching greenhouse that houses plants representing different microhabitats of the environment for instructional and learning purposes. Site 3 indicates a large warehouse suitable for an exploratorium with interactive scientific (place-based) displays, including artifacts and collections from the]
ULM museum. Site 4 indicates office facilities. This building is a versatile space for classrooms (field-trips), meetings (workshops) and includes dining options.

Figure 2. South end of the property. Site 1 indicates a testing facility. This is an old dairy building, which is to be repurposed for clean water technology research. Site 2 is a large barn that is suitable for an outdoor learning classroom where students can participate in small-scale water quality testing and phytoremediation experiments. Site 3 is an open space for a butterfly garden, in partnership with the U.S. Fish and Wildlife Service. Site 4 is ideal for a nature trail for facilitating a local biodiversity and wetland tour for area science teachers and students.

Part V – Administration

A. Provide an administrative structure for the proposed unit, including reporting lines. A flow chart or diagram may be included.

```
Office of Academic Affairs
  Dr. Eric Pani, Vice President

College of Arts, Education, and Sciences
  Dr. Sandi Lemoine, Dean

Environmental Education and Research Center
  Dr. Joydeep Bhattacharjee, Co-Director

College of Health & Pharmaceutical Sciences
  Dr. Benny Blaylock, Dean

Environmental Education and Research Center
  Dr. Kevin Baer, Co-Director
```
B. Will the proposed unit significantly affect the present administrative structure of the campus? If so, explain.

No significant change in administrative structure will occur with the creation of the Center.

Part VI – Budget

A. Please provide a projected one-year budget, including sources and amounts of funding/revenue and costs/expenditures on the budget form (Appendix 2).

Funding for the Center will be done incrementally. Start-up funding of $10,000 is provided through a reserve account of ULM's Office of Academic Affairs. Future funding sources will be grants and contracts from agencies/entities that include but are not limited to:

- Louisiana Systemic Initiatives Program (LaSIP)
- U.S. Fish and Wildlife Service
- Louisiana Department of Wildlife and Fisheries' Environmental Education Commission (LEEC) Grant Program
- EPA Environmental Education (EE) and Wetland Program Development Grants
- LDADF - Office of Soil and Water Conservation - Project WET
- USDA-NRCS Regional Conservation Partnership Program
- Louisiana NRCS Conservation Innovation Grant Program
- Local municipalities and businesses
APPENDIX 1
BIOGRAPHICAL SKETCH OF KEY PERSONNEL
BIOGRAPHICAL SKETCH

Provide the following information for the project director, co-project director, and other key personnel/consultants. Begin with the principal investigator/program director. Photocopy this page for each person.

Name: Joydeep Bhattacharjee

Position Title: Associate Professor of Biology

EDUCATION (Begin with baccalaureate or other initial professional education and include postdoctoral training.)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
<th>FIELD OF STUDY</th>
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<tr>
<td>Siliguri College</td>
<td>B.S.</td>
<td>1997</td>
<td>Botany (Major) Zoology and Chemistry (Minors)</td>
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<td>North Bengal University</td>
<td>M.S.</td>
<td>2000</td>
<td>Botany</td>
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<tr>
<td>Texas Tech University</td>
<td>Ph.D.</td>
<td>2005</td>
<td>Wildlife Science</td>
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Positions and Employment

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<tr>
<td>2012 – Present</td>
<td>Associate Professor</td>
<td>University of Louisiana at Monroe</td>
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<tr>
<td>2006 – 2012</td>
<td>Assistant Professor</td>
<td>University of Louisiana at Monroe</td>
</tr>
<tr>
<td>2005 – 2006</td>
<td>Post-Doctoral Researcher</td>
<td>ARS - USDA and Texas Tech University</td>
</tr>
<tr>
<td>2000 – 2001</td>
<td>Research Associate</td>
<td>IFRI, Indiana University Bloomington</td>
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</table>

Selected Peer-reviewed Publications in 2014-2016


Synergistic activities

1. Reviewer: Ad-hoc reviewers (about 1-2 manuscripts per year) for each of the following Journals: Wetlands, Environmental management, Ecosphere, Journal of international students, International journal of mathematical education in science and technology.
2. Advisory member of the Biological Review Board of the North Louisiana Refuge Complex.


5. Louisiana Systems Initiative Program – A three-year collaborative initiative among 30 middle school science teachers to re-focus teaching strategies of STEM disciplines. Carried out three summers and 6 mini-workshops (during the semester) to guide science teachers in using innovations in teaching science while adhering to Next Generation Science Standards.
**BIOGRAPHICAL SKETCH**

Provide the following information for the project director, co-project director, and other key personnel/consultants. Begin with the principal investigator/program director. Photocopy this page for each person.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevin N. Baer</td>
<td>Professor and Head, Department of Toxicology</td>
</tr>
</tbody>
</table>

**EDUCATION** (Begin with baccalaureate or other initial professional education and include postdoctoral training.)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
<th>FIELD OF STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast Louisiana</td>
<td>B.S.</td>
<td>05/82</td>
<td>Biology</td>
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<tr>
<td>University</td>
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<td></td>
<td></td>
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<tr>
<td>Northeast Louisiana</td>
<td>Ph.D.</td>
<td>05/88</td>
<td>Pharmacology/</td>
</tr>
<tr>
<td>University</td>
<td></td>
<td></td>
<td>Toxicology</td>
</tr>
<tr>
<td>University of Texas at</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austin, Marine Science</td>
<td></td>
<td></td>
<td>Marine Biochemistry</td>
</tr>
<tr>
<td>Institute</td>
<td>Postdoctoral</td>
<td>04/88</td>
<td></td>
</tr>
</tbody>
</table>

**Positions and Employment**


1994-2000: Assistant Professor, The University of Louisiana at Monroe, College of Pharmacy, Monroe, LA

2000-2006: Associate Professor, The University of Louisiana at Monroe, College of Pharmacy, Monroe, LA

2006-present: Professor and Head of Toxicology, The University of Louisiana at Monroe, College of Pharmacy, Monroe, LA

**Selected Peer-reviewed Publications**


**Research Support**

2012-2013 Are There Unintended Toxic Effects on Resident Biota in Wetlands Used for Water Quality Management? LACRI (Co-Principal Investigator) $39,811

2012-2013 Watershed Monitoring in the Ouachita River Basin - Joe's Bayou Phase II. USEPA-LDEQ (Principal Investigator - Federal $53,467, Total $95,098).


2011-2015 Mississippi River Basin Initiative. USDA (Co-Principle Investigator - Federal $50,000, Total $300,000).
Provide the following information for the project director, co-project director, and other key personnel/consultants. Begin with the principal investigator/program director. Photocopy this page for each person.

Saswati Majumdar
Adjunct faculty in the College of Arts, Sciences, and Education for School of Sciences and Education

EDUCATION (Begin with baccalaureate or other initial professional education and include postdoctoral training.

Doctor of Education, Ed. D. – 2015 in Curriculum & Instruction (GPA- 4.0)

Master’s in Alternative Certification for Teaching, M.A.T. – 2010 in Secondary Science (GPA- 4.0)

Master of Science, Major – Human Physiology - 2004 (Awarded Distinction)

Bachelor of Science, Major - Honors in Physiology – 2002 (Awarded Gold Medal for Academic Excellence)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
<th>FIELD OF STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Louisiana at Monroe</td>
<td>Ed.D.</td>
<td>2015</td>
<td>Curriculum and Instruction</td>
</tr>
<tr>
<td>University of Louisiana at Monroe</td>
<td>M.A.T.</td>
<td>2010</td>
<td>Secondary Science</td>
</tr>
<tr>
<td>Presidency College, Calcutta University, India.</td>
<td>M.S.</td>
<td>2004</td>
<td>Human Physiology</td>
</tr>
</tbody>
</table>

Positions and Employment

Adjunct Faculty [currently teaching in Biology and Education programs]
College of Arts, Education and Sciences
University of Louisiana, Monroe – 71209
2010 – Present

Selected Peer-reviewed Publications

BIOGRAPHICAL SKETCH

Provide the following information for the project director, co-project director, and other key personnel/consultants. Begin with the principal investigator/program director. Photocopy this page for each person.

Name: Kih Kim  
Position Title: Associate Professor

EDUCATION (Begin with baccalaureate or other initial professional education and include postdoctoral training.)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
<th>FIELD OF STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Wyoming, Laramie WY</td>
<td>Ph.D.</td>
<td>2005</td>
<td>Instructional Technology</td>
</tr>
<tr>
<td>South Dakota State University</td>
<td>M.Ed.</td>
<td>2001</td>
<td>Curriculum &amp; Instruction</td>
</tr>
<tr>
<td>Chungnam National University, Daejeon Korea</td>
<td>M.A.</td>
<td>1996</td>
<td>English Education</td>
</tr>
<tr>
<td>Chungnam National University, Daejeon Korea</td>
<td>B.A.</td>
<td>1992</td>
<td>English Language &amp; Literature</td>
</tr>
</tbody>
</table>

Positions and Employment

Associate Professor, College of Arts, Education and Sciences, the University of Louisiana at Monroe, Aug. 2014 – present

Director of Global Education, College of Arts, Education and Sciences, the University of Louisiana at Monroe, Aug. 2013 – present

Assistant Professor, College of Arts, Education and Sciences, the University of Louisiana at Monroe, Aug. 2011 – Aug. 2014

Recommended to be promoted as Associate Professor at Northwestern State University in May 2011

Assistant Professor, College of Education, Northwestern State University, Aug. 2006 – Aug. 2011

Visiting Assistant Professor, Department of Adult Learning & Technology, College of Education, University of Wyoming, Aug. 2005 – Aug. 2006

Selected Peer-reviewed Publications


Selected Peer-reviewed Publications, Con’t


**Research Support**


Kim, K. (2013). Research Hub Faculty Mini-grant, College of Education and Human Development, University of Louisiana at Monroe ($1,000).

Kim, K. (2013). Twenty-two Korean student ESL program at the University of Louisiana at Monroe in Monroe, LA on January 7 – February 22, 2013, funded by Hanbat National University, Daejon South Korea ($31,200).

Kim, K. (2013). Seven Korean student teaching program at the University of Louisiana at Monroe and K-12 schools in Ouachita Parish, LA on September 9 – October 11, 2013, funded by Chungnam National University, Daejon South Korea ($27,825).

Kim, K. (2013). Eight Korean student internship program at the University of Louisiana at Monroe and companies in Monroe, LA on January 7 – February 22, 2013, funded by Hanbat National University, Daejon South Korea ($31,200).

Kim, K. (2013). Research Hub Min Grant titled “Development of ULM + International Institutions PLAZA, a Web-based social network platform” funded by the Dean of College of Education and Human Development, University of Louisiana at Monroe ($1,000).

Kim, K. (2012). Seven Korean student teaching program at the University of Louisiana at Monroe and Neville High School in Monroe, LA on April 13 – May 19, 2012, funded by Chungnam National University, Daejoen South Korea ($19,850).

Kim, K. (2012). Fifteen Korean student internship program at the University of Louisiana at Monroe and companies in Monroe, LA on January 6 – February 25, 2012, funded by Hanbat National University, Daejon South Korea ($43,665).

Kim, K. (2011). Seven Korean student teaching program at Northwestern State University and K-12 schools in Natchitoches, LA on April – May 2011, funded by Chungnam National University, Daejon South Korea ($25,600).

Kim, K. (2010). Nine Korean student teaching program at Northwestern State University and K-12 schools in Natchitoches, LA on April – May 2010, funded by Chungnam National University, Daejon South Korea ($24,400).

**BIOGRAPHICAL SKETCH**

Provide the following information for the project director, co-project director, and other key personnel/consultants. Begin with the principal investigator/program director. Photocopy this page for each person.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position Title</th>
<th>Associate Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael (Sean) Chenoweth</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EDUCATION**

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE</th>
<th>YEAR CONFERRED</th>
<th>FIELD OF STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Miami, FL</td>
<td>B.A.</td>
<td>1994</td>
<td>Geography</td>
</tr>
<tr>
<td>University of Arkansas,</td>
<td>M.A.</td>
<td>1997</td>
<td>Geography</td>
</tr>
<tr>
<td>Fayetteville</td>
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<tr>
<td>University of Wisconsin – Milwaukee</td>
<td>Ph.D.</td>
<td>2003</td>
<td>Geography</td>
</tr>
</tbody>
</table>

**Positions and Employment**

Associate Professor, The University of Louisiana at Monroe (ULM). (August 2003 - Present).


**Selected Peer-reviewed Publications**


**Research Support**

Endowed Professorship in Geology ($25,800) ; ULM Foundation; supports field research on karst landscapes (2014 – 2017).

Unmanned Aerial Systems and Farmer Training ($110,000); grant from the Delta Regional Authority (2015 – 2016)
APPENDIX 2
PROJECTED BUDGET

<table>
<thead>
<tr>
<th>Category</th>
<th>Year 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary</td>
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</tr>
<tr>
<td>Undergraduate Students (2)</td>
<td>$2,000</td>
</tr>
<tr>
<td>Travel</td>
<td></td>
</tr>
<tr>
<td>Field Site</td>
<td>$500</td>
</tr>
<tr>
<td>Materials /Supplies</td>
<td></td>
</tr>
<tr>
<td>Water Quality Monitoring: Includes HydroLab reagents, fecal coliform sampling bottles, gloves, fertilizers, watering equipment, pumps, waterlines, relays and associated hardware</td>
<td>$500</td>
</tr>
<tr>
<td>Aquatic vegetation surveys</td>
<td>$500</td>
</tr>
<tr>
<td>Educational workshop materials</td>
<td>$5,000</td>
</tr>
<tr>
<td>Total Materials/Supplies</td>
<td>$6,000</td>
</tr>
<tr>
<td>Analytical Lab Costs</td>
<td></td>
</tr>
<tr>
<td>Water quality parameters - nutrients, bacteria, selected pollutants</td>
<td>$1,500</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td><strong>$10,000</strong></td>
</tr>
</tbody>
</table>

Source of funds: Self-generated revenue.
August 3, 2016

Dr. Kevin Baer
University of Louisiana at Monroe
Dept. of Toxicology
700 University Avenue
Monroe, LA 71209

Re: ULM Environmental Education and Research Center-Calhoun, LA

Dear Dr. Baer,

It is highly anticipated that the water and wetlands research, and subsequent information dissemination by the developing ULM Environmental Education and Research Center (ULM-EERC) will provide many benefits toward natural resources conservation, education, community involvement and public health and well-being for the people of Louisiana. With ULMs research goals being attained in clean water technology, proper utilization and management of natural wetlands, and STEM careers and economic development in Ouachita Parish, the rest of the State will also benefit from your research and education, and from this timely example of synergistic agricultural-community-school interaction and involvement.

The LDAF/Office of Soil & Water Conservation appreciates and supports the dedication and commitment of ULM staff in development and management of the ULM-EERC.

Sincerely,

Bradley E. Spicer, Assistant Commissioner
LA Dept. of Agriculture & Forestry
Office of Soil & Water Conservation
Item E.9. University of Louisiana at Monroe’s request for approval for an Agreement of Academic Cooperation with Catholic Kwandong University, Republic of Korea.

EXECUTIVE SUMMARY

The University of Louisiana at Monroe (ULM) and Catholic Kwandong University (CKU) would like to enter into an agreement of academic cooperation that would provide exchange opportunities for students, faculty and staff. This partnership would be advantageous to the ULM in that it adds to others already approved in Korea, Japan, and China and establishes an initial relationship with CKU.

ULM and CKU have structured an exchange agreement to promote activities in the areas of student exchange, faculty and administrative staff exchange as well as collaborative endeavors with research projects, lectures, symposia, seminars, workshops, or similar endeavors. The agreement will also provide for collaboration in instructional and cultural programs, including publication activities of mutual interests and shared access to information networks.

The proposed agreement will comply with the procedures, policies, and practices of each institution as well as the law and regulations of the Republic of Korea, the United States of America, and the State of Louisiana. Both institutions acknowledge that the visit by faculty and students from one institution to the other shall be subject to the entry and visa regulations of each country and shall comply with the regulations and policies of CKU and ULM.

The proposed exchange agreement does not bind either party to a financial commitment and offers an excellent opportunity to enhance international education at both institutions. If approved, the agreement will be effective the date of approval for the period of five years and may be renewed by mutual written agreement for an additional five years. A minimum period of six months’ notice will be required from either party wishing to terminate the agreement at any other time. In the event of termination, all commitments to students participating in the program will be honored by relevant parties.

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 University of Louisiana at Monroe’s request for an Agreement of Academic Cooperation with Catholic Kwandong University, Republic of Korea.
October 3, 2016

Dr. Daniel D. Reneau, Interim President
University of Louisiana System
1201 North Third Street 7-300
Baton Rouge, LA 70802

Dear Dr. Reneau:

I respectfully request consideration and approval of the Agreement of Academic Cooperation between Catholic Kwandong University, Republic of Korea, and the University of Louisiana at Monroe.

If I may be of further assistance, please let me know.

Sincerely,

Nick J. Bruno, Ph.D.
President
AGREEMENT OF ACADEMIC COOPERATION
BETWEEN
CATHOLIC KWANDONG UNIVERSITY
AND
THE UNIVERSITY OF LOUISIANA AT MONROE, U.S.A.

In recognition of their common interests in developing bilateral relations and convinced that cooperation between institutes of higher learning contributes to cultural enrichment, scientific progress, and the consolidation of friendship between Catholic Kwandong University (hereinafter “CKU”), Republic of Korea, and the University of Louisiana at Monroe (hereinafter “ULM”), Monroe, Louisiana, the United States of America agree to establish the following Agreement of Academic Cooperation.

I

This agreement will promote activities in the following areas:
- Exchange of students
- Exchange of faculty and administrative staff
- Collaborative research projects, lectures, symposia, seminars, workshops, or similar endeavors
- Exchange of academic information and materials
- Collaboration in instructional and cultural programs, including publication activities of mutual interests and shared access to information networks

II

Specific mechanisms for the implementation of particular cooperative and collaborative activities shall be established and described in writing by the responsible authority of each institution prior to the initiation of any program or activity.

III

1. All activities developed under the auspices of this Agreement will comply with the procedures, policies, and practices of each institution as well as the law and regulations of the Republic of Korea, the United States of America, and the State of Louisiana.

2. Both institutions acknowledge that the visit by faculty and students from one institution to the other shall be subject to the entry and visa regulations of each country and shall comply with the regulations and policies of CKU and ULM.
IV

1. This Agreement is established for a period of five (5) years, effective on the date of its signing.

2. In order to enhance the efficacy of their cooperative activities, CKU and ULM agree that it shall be possible to introduce changes and additions to the Agreement by means of mutually agreed upon additional written clauses.

3. At the end of each five-year period, this Agreement may be renewed by mutual written agreement for an additional five years. A minimum period of six months notice will be required from either party wishing to terminate the Agreement at any other time. In the event of termination, all commitments to students participating in the program will be honored by relevant parties.

SIGN BY:

.................................................................  .................................................................
Chun Myung Hun                                  Nick J. Bruno
President                                      President
Catholic Kwandong University                      University of Louisiana at Monroe

.................................................................  .................................................................
DATE                                                DATE
Item E.10. University of New Orleans' request for approval of a Memorandum of Understanding with Hebei University of Technology, Tianjin, China.

EXECUTIVE SUMMARY

The objective of the Memorandum of Understanding (MOU) is to promote the establishment of a program of student and scholarly exchange in an effort to strengthen existing areas of common interest for Hebei University of Technology, Tianjin, China and the University of New Orleans (UNO).

The proposed MOU will create a framework for student exchange, to encourage faculty and administrative contacts, and to promote the mutual discovery of knowledge. Both institutions find it mutually beneficial to explore opportunities for academic exchange and, as a result, wish to enter into an agreement.

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 Memorandum of Understanding with Hebei University of Technology, Tianjin, China.
October 3, 2016

Dr. Dan Reneau  
Interim President  
The University of Louisiana System  
1201 North Third Street  
Baton Rouge, LA 70802  

Re: MOU between Hebei University of Technology and UNO  

Dear Dr. Reneau,  

I am requesting approval of a joint study collaboration agreement between Hebei University of Technology Tianjin, China and the University of New Orleans. Both institutions have areas of common interest and similar academic goals in that both institutions are interested in establishing links to strengthen their areas of common interest.  

Thank you for your consideration.  

Sincerely,  

[Signature]  

John W. Nicklow  
President
Memorandum of Understanding

Between

The University of New Orleans

New Orleans, Louisiana, USA

And

Hebei University of Technology

Tianjin, China

The University of New Orleans and Hebei University of Technology have areas of common interest and similar academic goals in that both institutions are interested in establishing links to strengthen their areas of common interest;

In accordance with the foregoing, it has been decided to establish a collaborative Memorandum of Understanding (MOU) between the two institutions, which, therefore, agree to the following:

1. To develop academic links establishing an exchange of information between the two universities with regard to programs and course offerings.

2. To promote the exchange of professors and research personnel between the two institutions in order to allow faculty members to perform joint research projects between both universities.

3. To promote collaboration in the training of undergraduate and graduate students between the two institutions. More detailed arrangements will be specified in agreements between related schools in both institutions.

4. The two institutions will offer to exchange faculty and students (undergraduate and graduate) the same services as those offered to their own faculty and students, provide academic services and accept course work completed at the host university as equivalent to their own within the limits of existing regulations in each university.

In order to carry out this collaborative Memorandum of Understanding, each university will name a liaison person to establish ongoing programs, in accordance with the regulations and economic limitations of each institution, and supervise the implementation of the MOU.
This MOU will take effect at the time it is signed by the President of both Universities and last for a period of three years. At the end of that term it will expire unless both parties renew in writing.

This MOU may be terminated upon the written notice of either party.

This MOU may be modified through the written agreement of both parties. This document is executed in English and will consist of two originals.

The University of New Orleans
President, John Nicklow

Hebei University of Technology
President, Guo, Jian

Date

Contact liaison:
John Williams
Dean, Business School

Date

Contact liaison:
Yu, Ming
Director, International Office
Item E.11. University of New Orleans' request for approval of a Memorandum of Understanding with the University of Mississippi.

EXECUTIVE SUMMARY

The purpose of the proposed Memorandum of Understanding (MOU) between the University of New Orleans (UNO) and the University of Mississippi (UM) is to promote opportunities for students and faculty who participate in study abroad programs. UM students will be able to participate with UNO students when attending the UNO-Innsbruck International Summer School in Innsbruck, Austria.

The proposed MOU requires participating UM students to meet the same eligibility requirements as all other applicants. The MOU allows for UNO to accept eligible UM students without the need for the submission of the Home Institution Approval Form which is typically required for other students. As outlined in the MOU, selected UM students will be subject to all rules, regulations, and standards of conduct of the UNO-Innsbruck International Summer School while abroad, as well as UM rules, regulations, and standards of conduct.

The University of Mississippi agrees to accept full academic credit for UM equivalent courses for all student credit hours earned during the summer program. UNO agrees to send an official transcript for all UM students in attendance on the UNO-Innsbruck International Summer School to the UM Study Abroad Office within a reasonable period of time after the completion of the summer program. UM will be responsible for facilitating promotion of the UNO-Innsbruck International Summer School to UM students.

The proposed agreement will be valid for two years and become effective on the date signed by both parties. Either party can terminate the agreement at any time giving 120 days' written notice to each other.

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 Memorandum of Understanding with the University of Mississippi.
September 29, 2016

Dr. Dan Reneau  
Interim President  
The University of Louisiana System  
1201 North Third Street  
Baton Rouge, LA 70802

Re: MOU between University of Mississippi and UNO

Dear Dr. Reneau,

I am requesting approval of an agreement between the University of Mississippi and the University of New Orleans. Both institutions understand the benefits derived by students and faculty who participate on study abroad programs and both consent to a memorandum of understanding concerning UM student attendance on the UNO-Innsbruck International Summer School in Innsbruck, Austria.

Thank you for your consideration.

Sincerely,

[Signature]

John W. Nicklow  
President
MEMORANDUM OF UNDERSTANDING
THE UNIVERSITY OF NEW ORLEANS AND THE UNIVERSITY OF MISSISSIPPI

WHEREAS both the University of New Orleans (UNO) and the University of Mississippi (UM) understand the benefits derived by students and faculty who participate on study abroad programs, both consent to a memorandum of understanding concerning UM student attendance on the UNO-Innsbruck International Summer School in Innsbruck, Austria.

University of New Orleans Obligations:

1. The University of New Orleans will accept eligible University of Mississippi students without the need for the Home Institution Approval Form required by other students attending the UNO-Innsbruck International Summer School.

2. The University of New Orleans will provide the UM Study Abroad Office with timely information necessary to facilitate UM student participation, including student enrollment data as well as yearly program updates and deadlines.

3. The University of New Orleans shall not award any Title IV U.S. federal financial aid to University of Mississippi students participating in the UNO-Innsbruck International Summer School.

4. The University of New Orleans agrees to send an official transcript for all UM students in attendance on the UNO-Innsbruck International Summer School to the UM Study Abroad Office within a reasonable period of time after the UM student has completed the UNO-Innsbruck International Summer School.

University of Mississippi Obligations:

5. The University of Mississippi agrees to accept full academic credit for UM equivalent courses for all student credit hours earned on the UNO-Innsbruck International Summer School, provided the credits appear on an official University of New Orleans transcript. It is the responsibility of the student to follow all UM rules and regulations concerning acceptance of credit and to ensure compliance is met.

6. The University of Mississippi will facilitate promotion of the UNO-Innsbruck International Summer School to UM students by including, but not limited to, inviting UNO staff to exhibit at UM study abroad fairs, linking to the UNO-Innsbruck program website from the UM study abroad web site, agreeing to course equivalents for UNO courses taught in Innsbruck, and facilitating the organization of a pre-departure orientation for UM students conducted by UNO staff members.
General Provisions:

7. UM students shall pay the program deposit directly to UNO upon submitting their application. UNO shall then assess the remaining amount due for UM students and invoice UM directly in accordance with the UNO payment/cancellation schedule included in the official UNO-Innsbruck brochure and web-site. UM agrees to pay all amounts due promptly upon receipt of invoice and UNO reserves the right to adjust costs when necessary.

8. University of Mississippi students participating in the UNO-Innsbruck International Summer School will be subject to the same eligibility requirements as all other applicants. If selected by UNO to participate, a UM student will be subject to all rules, regulations, and standards of conduct of the UNO-Innsbruck International Summer School while abroad, as well as UM rules, regulations, and standards of conduct. UM students must complete all requirements of UNO to receive credit.

This letter of agreement shall be effective upon the last signature date and will last for a period of two years, subject to amendment and/or renewal by mutual written agreement of both institutions. Either institution may terminate the agreement by serving written notice 120 days prior to the anticipated termination date. Termination does not affect any student already participating in the UNO-Innsbruck International Summer School.

This memorandum of understanding is signed in two originals.

For the University of New Orleans:                                  For the University of Mississippi:

John Nicklow, Ph.D.                             Date       Jeffrey S. Vitter, Ph.D.                             Date
President                                      President    Chancellor