AGENDA
ACADEMIC AND STUDENT AFFAIRS COMMITTEE
BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM
10:20 a.m., Thursday, August 27, 2015**
Claiborne Building Conference Center
Room 100, “Louisiana Purchase Room”
1201 North Third Street
Baton Rouge, Louisiana

MEMBERS:
Dr. Kelly Faircloth, Chair
Mr. Robert Shreve, Vice Chair
Ms. Maggie Brakeville
Mr. John Condos
Mr. Jimmy Long
Mr. Shawn Murphy
Mr. Gary Solomon

A. Call to Order
B. Roll Call
C. Approval of Minutes of June 25, 2015 Committee Meeting
D. Consent Agenda:

   Board Agenda Item E.1.

Louisiana Tech University’s request for approval to revise the alignment of the
Computer Information Systems Group from the School of Accountancy and Information
Systems to a separate entity, the Computer Information Systems Department, in the
College of Business.

   Board Agenda Item E.2.

Louisiana Tech University’s request for approval to offer ten existing academic
programs via distance learning technologies.

   Board Agenda Item E.3.

McNeese State University’s request for approval to terminate the Graduate Certificate in
Counseling K-12.

   Board Agenda Item E.4.

Northwestern State University’s request for approval to offer online an existing
academic program: Bachelor of Social Work effective Fall 2015.
Board Agenda Item E.5.

Northwestern State University’s request for approval of a Proposal for a Post Associate Certificate in Quality Control.

Board Agenda Item E.6.

Northwestern State University’s request for approval of a Proposal for a Post Baccalaureate Certificate (PBC) in Quality Control.

Board Agenda Item E.7.

Northwestern State University’s request for approval of a Proposal for a Post Associate Certificate in Project Management.

Board Agenda Item E.8.

Northwestern State University’s request for approval of a Proposal for a Post Baccalaureate Certificate (PBC) in Project Management.

Board Agenda Item E.9.

Northwestern State University’s request for approval of a Proposal for a Post Baccalaureate Certificate (PBC) in Business Analytics.

Board Agenda Item E.10.

Northwestern State University’s request for approval of a Proposal for a Post Graduate Certificate in Family Nurse Practitioner.

Board Agenda Item E.11.

Northwestern State University’s request for approval of a Letter of Intent to offer an Associate of Applied Science Degree in Engineering Technology.

Board Agenda Item E.12.

Northwestern State University’s request for approval of a Letter of Intent to offer a Doctor of Education in Adult Learning and Leadership degree program.

Board Agenda Item E.13.

University of Louisiana at Lafayette’s request for approval to offer an existing program online: the Master’s Degree Program in Educational Leadership.
Board Agenda Item E.14.

University of Louisiana at Lafayette’s request for approval of a Letter of Intent to offer a Master of Science degree program in Environmental Resource Science.

Board Agenda Item E.15.

University of Louisiana at Monroe’s request for approval of a First Amendment to the Memorandum of Understanding between the University of Louisiana at Monroe and the National University Corporation Ehime University in Japan.

Board Agenda Item E.16.

University of Louisiana at Monroe’s request for approval of Cooperative Agreements with three international universities in the Republic of Korea.

Board Agenda Item E.17.

University of New Orleans’ request for approval of the Joseph Canizaro and James Livingston Center for Environmental Informatics.

Board Agenda Item E.18.

University of Louisiana System’s request for approval of System Universities’ 2015-16 Promotions in Faculty Rank and Recommendations for Tenure.

E. Other Business

F. Adjournment
Consent Agenda
Item E.1. Louisiana Tech University’s request for approval to revise the alignment of the Computer Information Systems Group from the School of Accountancy and Information Systems to a separate entity, the Computer Information Systems Department, in the College of Business.

EXECUTIVE SUMMARY

Louisiana Tech University requests approval to revise the alignment of the Computer Information Systems Group from the School of Accountancy and Information Systems to a separate entity, the Computer Information Systems Department in the College of Business. The proposed revision would be budget neutral.

The identity of Computer Information Systems (CIS) as a separate, visible department will position its faculty and students to participate at a more meaningful interdisciplinary role within and beyond the College of Business. The CIS curricula and programs will continue to serve students seeking a major in computer information systems, and the Department and its research and curricula will serve as an integrating force across all disciplines in the College of Business. The Department’s offerings will support and emphasize how technology and business analytics drive business decisions and impact the overall business environment.

In addition to the CIS Major, the faculty of this unit offer a nationally recognized information assurance certificate as well as a comprehensive suite of cyber-related coursework. This move to highlight and distinguish Computer Information Systems is expected to accelerate the growth of students in the CIS area and in the overall enrollment of the College so as to meet the current and future needs of the University’s external corporate partners.

This move is consistent with the missions of Louisiana Tech University and the College of Business to develop leaders with an understanding of how to manage technology, innovation and technological change. The proposed merger would best meet the needs of the programs, its students, and the University.
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 to revise the alignment of the Computer Information Systems Group from the School of Accountancy and Information Systems to a separate entity, the Computer Information Systems Department, in the College of Business.
LADIES AND GENTLEMEN OF THE BOARD OF SUPERVISORS OF THE UNIVERSITY OF LOUISIANA SYSTEM:

Louisiana Tech University requests approval to revise the alignment of the Computer Information Systems Group from the School of Accountancy and Information Systems to a separate entity, the Computer Information Systems Department, in the College of Business.

To accomplish this revision, the appropriate budget portion would be reallocated, and the names of the departmental units would change to the Computer Information Systems Department and the School of Accountancy. The proposed revision would be budget neutral.

The identity of Computer Information Systems as a separate, visible department will position its faculty and students to participate at a more meaningful interdisciplinary role within and beyond the College of Business. The CIS curricula and programs will continue to serve students seeking a major in computer information systems, and the Department and its research and curricula will serve as an integrating force across all disciplines in the College of Business. The Department’s offerings will support and emphasize how technology and business analytics drive business decisions and impact the overall business environment.

In addition to the CIS Major, the faculty of this unit offer a nationally recognized information assurance certificate as well as a comprehensive suite of cyber-related coursework. This move to highlight and distinguish Computer Information Systems is expected to accelerate the growth of students in the CIS area and in the overall enrollment of the College so as to meet the current and future needs of our external corporate partners and University goals.

This move is consistent with the missions of Louisiana Tech University and the College of Business to develop leaders with an understanding of how to manage technology, innovation, and technological change.

Sincerely,

[Signature]

Leslie K. Guice
President
Item E.2. Louisiana Tech University’s request for approval to offer ten existing academic programs via distance learning technologies.

EXECUTIVE SUMMARY

Louisiana Tech University requests approval to offer six existing Graduate Certificate programs and four existing Master’s Degree programs through distance learning technologies. If approved, these programs will be implemented in Fall Quarter 2015.

- Graduate Certificate, Academically Gifted
- Graduate Certificate, Visual Impairments – Blind Education
- Graduate Certificate, Special Education – Early Intervention
- Graduate Certificate, Higher Education Administration
- Graduate Certificate, Special Education Mild/Moderate for Elementary Education Grades 1-5
- Graduate Certificate, Special Education Mild/Moderate for Secondary Education Grades 6-12
- Master of Education, Curriculum and Instruction
- Master of Arts in Teaching, Elementary Education and Special Education Mild/Moderate Grades 1-5
- Master of Arts in Teaching, Elementary Education and Special Education Mild/Moderate Grades 6-12
- Master of Arts in Teaching, Secondary Education Grades 6-12

There is a significant demand for online availability of these courses, particularly for full-time practitioners seeking to continue professional development and training to meet the needs of the classroom. The College of Education’s faculty are dedicated to the success of these programs and have worked tirelessly to develop course materials and procedures to ensure that the programs are equivalent to the face-to-face options.

Courses for the program already exist and consequently will be taught by current faculty. As well, existing resources will be utilized to implement the program via distance learning. All coursework including lecture materials, assignments, testing, and instructional videos will be provided within Moodle for students.
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 to offer ten existing programs via distance learning technologies.
LADIES AND GENTLEMEN OF THE BOARD OF SUPERVISORS OF THE UNIVERSITY OF LOUISIANA SYSTEM:

Request for Authority to Offer Existing Academic Programs through Distance Learning Technologies

Louisiana Tech University respectfully requests approval to offer six existing Graduate Certificate programs and four existing Master's Degree programs through distance learning technologies:

- Graduate Certificate, Academically Gifted
- Graduate Certificate, Visual Impairments-Blind Education
- Graduate Certificate, Special Education-Early Intervention
- Graduate Certificate, Higher Education Administration
- Graduate Certificate, Special Education Mild/Moderate for Elementary Education Grades 1-5
- Graduate Certificate, Special Education Mild/Moderate for Secondary Education Grades 6-12
- Master of Education, Curriculum and Instruction
- Master of Arts in Teaching, Elementary Education and Special Education Mild/Moderate Grades 1-5
- Master of Arts in Teaching, Elementary Education and Special Education Mild/Moderate Grades 6-12
- Master of Arts in Teaching, Secondary Education Grades 6-12

Demand for online availability for these courses is significant, especially for full-time practitioners seeking to continue professional development and training to meet the needs of the classroom. The College of Education’s faculty are dedicated to the success of these programs and have worked tirelessly to develop course materials and procedures to ensure that the programs are equivalent to the face-to-face options. We are requesting that these programs be implemented in Fall Quarter 2015.

Additional information is included on the attached forms. Your consideration of our proposal to offer these existing academic programs utilizing distance education technologies is appreciated.

Sincerely,

Leslie K. Guice
President

Attachments (10)
DELIVERY OF DEGREE PROGRAMS THROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES
(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy, 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Graduate Certificate, Academically Gifted: CIP 131004

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.

   The Graduate Certificate, Academically Gifted enables Louisiana teachers to add the Academically Gifted endorsement to an existing teaching certificate. There are no differences in the program to be delivered via distance and the program which is delivered face-to-face.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 100% online.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours when they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

If this is the campus' first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

[Signature]
Provost/ Vice Chancellor for Academic Affairs

Date: 7/14/15

[Signature]
Campus Head (or Authorized Signature)

[Signature]
System Head (or Authorized Signature)
DELIVERY OF DEGREE PROGRAMS THROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES
(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy, 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Graduate Certificate, Visual Impairments - Blind Education: CIP 131009

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.
   The Graduate Certificate, Visual Impairments - Blind Education, enables Louisiana teachers to add an endorsement to an existing teaching certificate. There are no differences in the program to be delivered via distance and the program which is delivered face-to-face.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 100% online.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours when they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

If this is the campus’ first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

Provost/ Vice Chancellor for Academic Affairs

Date

System Head (or Authorized Signature)
REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES

(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy, 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Graduate Certificate. Special Education-Early Intervention: Birth-5: CIP 131015

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.

   The Graduate Certificate, Special Education-Early Intervention: Birth-5 enables Louisiana teachers to add an endorsement to an existing teaching certificate. There are no differences in the program to be delivered via distance and the program which is delivered face-to-face.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 83% (five of six courses) online.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours when they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

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Provost/ Vice Chancellor for Academic Affairs

Leslie K. Guice

Campus Head (or Authorized Signature) System Head (or Authorized Signature)

[Signature]

7/14/15
Date
DELIVERY OF DEGREE PROGRAMS THROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES
(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy. 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Graduate Certificate, Higher Education Administration: CIP 130401

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.

   The Graduate Certificate, Higher Education Administration is a subset of the courses offered in the Ed D in Educational Leadership. Higher Education Administration concentration and prepares students to work in higher education administration. There are no differences in the program to be delivered via distance and the program which is delivered face-to-face.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 100% online.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours when they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

If this is the campus’ first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

[Signature]
Provost/Vice Chancellor for Academic Affairs

[Signature]
Date

[Signature]
Campus Head (or Authorized Signature)

[Signature]
System Head (or Authorized Signature)
DELIVERY OF DEGREE PROGRAMS THOROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES
(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy, 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Graduate Certificate, Special Education Mild/Moderate for Elem Education Gr 1-5: CIP 131001

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.

   The Graduate Certificate, Special Education Mild/Moderate for Elem Education Gr 1-5 enables Louisiana teachers to add an endorsement to an existing teaching certificate. There are no differences in the program to be delivered via distance and the program which is delivered face-to-face.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 83% (five of six courses) online.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours when they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

If this is the campus' first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

Provost/Vice Chancellor for Academic Affairs

Campus Head (or Authorized Signature)

Date

System Head (or Authorized Signature)
DELIVERY OF DEGREE PROGRAMS THROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES

(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy, 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Graduate Certificate, Special Education Mild/Moderate for Secondary Education Gr 6-12: CIP 131001

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.

   The Graduate Certificate, Special Education Mild/Moderate for Secondary Education Gr 6-12 enables Louisiana teachers to add an endorsement to an existing teaching certificate. There are no differences in the program to be delivered via distance and the program which is delivered face-to-face.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 100% online.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours when they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

If this is the campus’ first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

Provost/ Vice Chancellor for Academic Affairs

Leslie Le. Smith

Campus Head (or Authorized Signature) System Head (or Authorized Signature)
DELIVERY OF DEGREE PROGRAMS THROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES

(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy, 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Master of Education, Curriculum & Instruction: CIP 130301

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.

   Master of Education, Curriculum & Instruction prepares students to work in a variety of specialized areas in educational contexts. There are no differences in the curriculum, admissions, clinical experiences, or graduation requirements between the program to be delivered via distance and the M Ed C&I program which is delivered face-to-face.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 100% online. Clinical experiences will take place at school-based sites and will require face-to-face supervision.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours when they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

If this is the campus’ first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

Provost/ Vice Chancellor for Academic Affairs

Leslie J. Guin

System Head (or Authorized Signature)

Campus Head (or Authorized Signature)

Date
DELIVERY OF DEGREE PROGRAMS THROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES
(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy, 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Master of Arts in Teaching, Elementary Education & Special Education Mild/Moderate Gr 1-5: CIP 131202

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.

   The Master of Arts in Teaching, Elementary Education & Special Education Mild/Moderate Gr 1-5 is an alternative teacher education program. Program completers are eligible for grades 1-5 all subjects and special education mild/moderate Louisiana teacher certification. There are no differences in the curriculum, admissions, clinical experiences, or graduation requirements between the program to be delivered via distance and the program which is currently being delivered via traditional modes.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 75% online. Clinical experiences will take place at school-based sites and will require face-to-face supervision.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours when they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

If this is the campus’ first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

[Signatures]
Provos/Vice Chancellor for Academic Affairs
Date

[Signatures]
Campus Head (or Authorized Signature)
System Head (or Authorized Signature)
DELIVERY OF DEGREE PROGRAMS THROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES

(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy, 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Master of Arts in Teaching, Secondary Education and Special Education Mild/Moderate Gr 6-12: CIP 131205

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.
   The Master of Arts in Teaching, Secondary Education and Special Education Mild/Moderate Gr 6-12 is an alternative teacher education program. Program completers are eligible for grades 6-12 subject specific and special education mild/moderate Louisiana teacher certification. There are no differences in the curriculum, admissions, clinical experiences, or graduation requirements between the program to be delivered via distance and the program which is currently being delivered via traditional modes.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 100% online. Clinical experiences will take place at school-based sites and will require face-to-face supervision.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours when they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

If this is the campus’ first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

[Signature]
Provost/ Vice Chancellor for Academic Affairs

[Signature]
Date

[Signature]
Campus Head (or Authorized Signature)

[Signature]
System Head (or Authorized Signature)
DELIVERY OF DEGREE PROGRAMS THROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES
(Academic Affairs Policy 2.12, revised January 2014)

1. University or College
   Louisiana Tech University

2. Name, Phone and Email Address of contact person for questions regarding this request
   Dr. Bryan McCoy, 318.257.4609, bmccoy@latech.edu

3. Name of Degree Program and CIP Classification
   Master of Arts in Teaching, Secondary Education-Gr 6-12; CIP 131205

4. List the initial date of implementation
   September, 2015

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.

   The Master of Arts in Teaching, Secondary Education-Gr 6-12 is an alternative teacher education program. Program completers are eligible for subject specific grades 6-12 Louisiana teacher certification. There are no differences in the curriculum, admissions, clinical experiences, or graduation requirements between the program to be delivered via distance and the program which is currently being delivered via traditional modes.

6. Briefly describe the extent to which the program will be offered via distance learning.
   The program coursework will be offered 100% online. Clinical experiences will take place at school-based sites and will require face-to-face supervision.

7. Describe distance learning technologies which will be used to offer the proposed program.
   The program will be primarily supported using Moodle Courseware. Moodle is used University wide and is well supported through the Center for Instructional Technology. Moodle supports a variety of media including print, audio and video. Moodle supports both synchronous and asynchronous communications as well as small group project-based learning.

8. Indicate where (city/town and parish) the proposed program will be offered.
   The program will be offered through the Louisiana Tech main campus in Ruston, Louisiana.

9. Describe processes in place to ensure that students have structured access to faculty.
   All instructors who will be teaching in this program have been trained through Quality Matters (QM) to develop and deliver online content. Courses will be developed following QM guidelines (rubric) and all courses will go through a rigorous QM peer review process. Faculty teaching online courses have required office hours where they are available to students face-to-face, via telephone and text, and via email. Additionally, instructors are required to maintain timely asynchronous (email & discussion forums) communications. Office hours and expectations for timely asynchronous communications are required elements in course syllabi.

If this is the campus' first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

Provost/ Vice Chancellor for Academic Affairs

[Signature]

Date

System Head (or Authorized Signature)

[Signature]
BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 27, 2015

Item E.3. McNeese State University’s request for approval to terminate the Graduate Certificate in Counseling K-12.

EXECUTIVE SUMMARY

McNeese State University requests approval to terminate the Graduate Certificate in Counseling K-12. According to the Louisiana Department of Education Bulletin 746, the State of Louisiana Department of Education no longer accepts an ancillary school counselor certificate for certification.

The University offers the Master of Education in School Counseling as an option for students who wish to become certified school counselors in Louisiana K-12 schools. Currently, there are no students enrolled in the Certificate program.

The termination of this program will have no effect on other academic programs in the Department, College, or University. No faculty will be affected by the program termination.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves McNeese State University’s request for approval to terminate the Graduate Certificate in Counseling K-12.
July 22, 2015

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

Dear Dr. Woodley:

Enclosed are (5) copies of McNeese State University’s request for approval to terminate the Graduate Certificate in Counseling K-12 to be placed on the ULS Board of Supervisors’ agenda for consideration and approval at the August 27, 2015 meeting.

Thank you for your attention in this matter.

Sincerely,

Philip C. Williams
President

Enclosures
July 22, 2015

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

Subject:  Request to Terminate the Graduate Certificate in Counseling K-12

Dear Dr. Woodley:

I request approval to remove the Graduate Certificate in Counseling K-12 (CIP 131101) from the degree inventory effective immediately. According to the Louisiana Department of Education Bulletin 746, the State of Louisiana Department of Education no longer accepts an ancillary school counselor certification for certification. There are no students enrolled in the program. McNeese offers the Master of Education in School Counseling as an option for students who wish to become certified school counselors in Louisiana K-12 schools.

Please do not hesitate to contact me if you have any questions about this request.

Sincerely,

Philip C. Williams
President

Is

Enclosure
MEMORANDUM

TO: President Philip Williams
FROM: Jeanne Daboval, Provost and Vice President for Academic and Student Affairs
SUBJECT: Request to Terminate Graduate Certificate in Counseling K-12
DATE: July 6, 2015

I request approval to remove the Graduate Certificate in Counseling K-12 (CIP 131101) from the degree inventory effective immediately. According to the Louisiana Department of Education Bulletin 746, the State of Louisiana Department of Education no longer accepts an ancillary school counselor certification for certification. There are no students enrolled in the program. McNeese offers the Master of Education in School Counseling as an option for students who wish to become certified school counselors in Louisiana K-12 schools.

Copy: Dr. Wayne Fetter, Dean of the Burton College of Education

[Signature]
July 6, 2015
Item E.4. Northwestern State University’s request for approval to offer online an existing academic program: Bachelor of Social Work effective Fall 2015.

EXECUTIVE SUMMARY

Northwestern State University requests consideration and approval to offer an online Bachelor of Social Work degree program. If approved, the University will begin the online program Fall 2015.

The Bachelor of Science in Social Work is a 120-hour degree program that prepares students for beginning generalist social work practice as well as lays the foundation for those planning to pursue the Masters in Social Work (MSW), toward which it qualifies them for advanced standing. The program, which has been in existence at the University since 1970, is fully accredited by the Council on Social Work Education (CSWE) and has maintained accreditation since 1977.

The proposed online program will not be different from the traditional program in terms of admission, curriculum, or graduation requirements. Assignments will be comparable across all formats. Courses for the program already exist and consequently will be taught by current faculty. As well, existing resources will be utilized to implement the program via distance learning. All coursework including lecture materials, assignments, testing, and instructional videos will be provided within Moodle for students.

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 offer online an existing academic program: Bachelor of Social Work effective Fall 2015.
July 14, 2015

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

Re: Letter of Intent: Bachelor of Social Work (BSW) through Distance Learning Technology

Dear Dr. Woodley:

Northwestern State University is requesting this item be placed on the agenda for approval at the August 2015 Board Meeting:

Northwestern is seeking approval of the Letter of Intent to offer a Bachelor of Social Work (BSW) through Distance Learning Technology.

Thank you for your consideration of this request.

Sincerely,

James B. Henderson
President

JBH/pc
Attachment
DELIVERY OF DEGREE PROGRAMS THROUGH DISTANCE EDUCATION TECHNOLOGY

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES
(Academic Affairs Policy 2.12, revised January 2014)

1. University or College

Northwestern State University of Louisiana

2. Name, Phone and Email Address of contact person for questions regarding this request

Wade M. Tyler, Ph. D., LCSW-BACS, ACSW,
Social Work Department Head
318-613-7097
tyler@nsula.edu

3. Name of Degree Program and CIP Classification

Bachelor of Social Work (BSW), CIP 440701

4. List the initial date of implementation

8/24/15

5. Briefly describe the program. If there are any differences (e.g., curriculum, admission, graduation requirements, etc.) between the program to be delivered via distance learning and the program offered through traditional delivery modes, explain and provide a rational for the differences.

The BSW is a 120-hour degree (62 hours in the major) program that prepares students for beginning generalist social work practice as well as lays the foundation for those planning to pursue the Masters in Social Work (MSW), toward which it qualifies them for advanced standing. The social work program at NSU has been in existence since 1970. The program is fully accredited by the Council on Social Work Education (CSWE), and has maintained accreditation since 1977. Every effort will be made to make the distance delivery of this program comparable to the traditional face-to-face format. There will be no differences in admission, curriculum, or graduation requirements. Assignments will be comparable across all formats.

6. Briefly describe the extent to which the program will be offered via distance learning.

All BSW courses that are offered face-to-face will also be offered via distance learning, using asynchronous internet course delivery and/or real time web conferencing capabilities.

7. Describe distance learning technologies which will be used to offer the proposed program.

The instructional design format for all proposed online social work courses is centered on the Moodle management system, which promotes faculty-student interaction, student-content interaction, and student-student interaction. Moodle is a unified asynchronous delivery system that includes assignment descriptions, links to both internal and external files that can contain text, audio, or video presentations, links to websites, and chat capabilities, providing students with a virtual classroom experience via the Internet. Additionally, WebEx, a real time web conferencing application will be used to provide synchronous courses and/or augment the asynchronous formats. Other technologies, such as Lecture
Capture, Movie Maker, Debut, Audacity, etc. will be used to develop content material, in the form of lectures, video and audio clips, and the like. Faculty will continue to integrate the most effective emerging technologies into all online courses of the program.

8. **Indicate where (city/town and parish) the proposed program will be offered.**

The program will be based at the Northwestern State University main campus at Natchitoches in Natchitoches Parish. Using the World Wide Web, this program has the potential of reaching students anywhere in the world.

9. **Describe processes in place to ensure that students have structured access to faculty.**

On the syllabus of each course, as well as in the posted instructions in the Moodle environment, faculty members provide contact information, including, at a minimum, email address, office telephone number, and physical office hours (when distance students can call in). Faculty members may elect to keep online office hours and to post personal mobile telephone numbers, in addition to the above. These guidelines have proved effective in the limited online courses available to date.

If this is the campus’ first request for approval to offer 50% or more of a program electronically, upon approval by the Board of Regents the campus must submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation. Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

Provost/ Vice Chancellor for Academic Affairs

Campus Head (or Authorized Signature)

Date

System Head (or Authorized Signature)
Item E.5. **Northwestern State University**'s request for approval of a Proposal for a Post Associate Certificate in Quality Control.

**EXECUTIVE SUMMARY**

Northwestern State University requests approval to offer a Post Associate Certificate in Quality Control. The proposed certificate will focus on effective decision making in technical, manufacturing, and service-providing industries. Students will gain pertinent knowledge to apply quality control techniques and principles to products, processes, or services in industrial environments.

The Post Associate Certificate in Quality Control program consists of 18 credit hours and will be delivered online and in a traditional classroom setting. Courses will come from the School of Business and the Department of Engineering Technology. Students who will be attracted to this program will come from a pool of students with Associate degrees from across the state and region. The program will appeal to working students with Associate degrees who want to advance their career goals within their organizations.

According to long-term projections for industrial production managers, the need for managers in industrial situations is 2,170 per year until 2022. In the Louisiana Workforce Commission’s (LWC) Five-Star Jobs listing, there are approximately 400 advertisements for inspectors, samplers, controllers, and industrial technician advertisements (accessed on 7/10/15). Through the offering of the proposed certificate program, it is expected that students holding an Associate degree and the proposed certificate will fill a number of inspector, sampler, controller, and supervisory positions in technical, manufacturing, and service-providing industries in the state. Additionally, this program will help in expanding the pool of skilled and highly skilled workers in the field of quality management.

This proposed program provides coursework in maintaining and improving quality. This certificate program will provide opportunities for advancement to current employees as well as an opportunity for other workers to gain entry to high-paying jobs markets.

The University projects an enrollment of 15 students during the initial year of implementation and 30 students by year five. As well, it is projected that there will be 12 graduates in the second year and 21 by the fifth year. The program will be offered in the College of Business and Social Sciences. Existing faculty will teach the courses for the proposed
program. No additional facilities, equipment, or library resources will be required. Thus, there will be no need for additional appropriations.

**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 Proposal for a Post Associate Certificate in Quality Control.
August 11, 2015

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

Re:   Proposal to Develop a New Academic Certificate Program:
      Post-Associate Certificate in Quality Control

Dear Dr. Woodley:

Northwestern State University is requesting this item be placed on the agenda for approval at the August 2015 Board Meeting:

   Northwestern is seeking approval of the Proposal to Develop a New Academic Certificate Program: Post-Associate Certificate in Quality Control.

Thank you for your consideration of this request.

Sincerely,

James B. Henderson
President

JBH/pc
Attachment
PROPOSAL to DEVELOP a NEW ACADEMIC CERTIFICATE PROGRAM
(CAS, PAC, PBC, GC, PMC, PPC)

Date:

Campus: Northwestern State University
Program: CIP, Certificate Designation, Title
15.0702, PAC, Post-Associate Certificate in Quality Control

Institutional Contact Person & Contact Info (if clarification is needed)
Dr. Lisa Abney
abney@nsula.edu, 318.357.5361

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

The Post-Associate Certificate in Quality Control focuses on effective decision-making in technical, manufacturing, and service providing industries. The program will allow students with Associate degree in any discipline to gain pertinent knowledge to apply quality control techniques and principles to products, processes, or services in the industrial environment thereby enabling them to work as a quality supervisor or quality manager.

This eighteen-hour program which will be delivered online and face to face will fulfill workforce needs which have grown as Louisiana has attracted many technical, manufacturing, and service providing industries over the past five years. Courses will come from the School of Business and the Department of Engineering Technology. Students will enroll in the following courses; all of which are existing courses.

Required Courses (12 credit hours)
• Mathematics of Statistics (MATH 2050, 3 credit hours)
• or Basic Business Statistics (BUAD 2120, 3 credit hours)
• Quality Control (IET 4720, 3 credit hours)
• Engineering Economics (IET 3570, 3 credit hours)
• Elements of Occupational Supervision (IET 4750, 3 credit hours)

Electives: (Take 2 electives, 6 credits hours)
• Technical Project Management (IET 3100, 3 credit hours)
• Production and Inventory Control (IET 4820, 3 credit hours)
• Intermediate Business Statistics (BUAD 3120, 3 credit hours)
• Business Law I (BUAD 3250, 3 credit hours)
• Database Systems (CIS 2980, 3 credit hours)
• Organization and Management (MGT 3220, credit hours)

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.

This program aligns with the University’s role, scope, and mission in that Northwestern has long been committed to education and economic development in the region. For several years, the Department of Engineering Technology at Northwestern State University of Louisiana (NSU) has been working with various manufacturing industries in northwest and central Louisiana. The Department also has close ties with the Manufacturing Managers Association of Central Louisiana. This organization and our alumni working in various technical, manufacturing, and service providing industries have indicated the need for students with Associate degree, a pathway to advance their career within their work environment. The proposed Post-Associate Certificate in Quality program provides such opportunities to the students. Additionally, students desiring to broaden their scope for career advancement but have Associate degree in non-technical area will also have opportunity to excel in their careers in technical field and achieve their aspirations.

According to long term projections for industrial production managers, the need for managers in industrial situations is 2170/year until 2022. In the Louisiana Workforce Commission’s (LWC) Five-Star Jobs listing, there are approximately 400 advertisements for inspector, samplers, controller, and industrial technician advertisements (accessed on 7/10/2015). With this proposed new certificate program, it is expected that students with Associate degree and the proposed certificate will fill a number of inspector, sampler, controller and supervisory positions in technical, manufacturing, and service providing industries in the State. Additionally this program will help in expanding the pool of skilled and highly skilled workers in the field of quality management in the State.

The Louisiana Workforce Commission projects major growth in the Northwest Region in the following industries. Since each type
of industry requires to maintain and improve quality of their product, process and services, needs skilled and highly skilled workers knowledgeable in the respective field. This proposed program provides coursework in maintaining and improving quality. There are no similar programs in the state of Louisiana. This certificate program will provide opportunities for advancement to current employees as well as a chance for other workers to gain entry to high-paying jobs markets.

**Table 1: LWC growth areas**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Growth 2010-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary metal manufacturing</td>
<td>177.8%</td>
</tr>
<tr>
<td>Transportation equipment manufacturing</td>
<td>68.8%</td>
</tr>
<tr>
<td>Pipeline transportation</td>
<td>50.0%</td>
</tr>
<tr>
<td>Merchant wholesalers, nondurable goods</td>
<td>32.7%</td>
</tr>
<tr>
<td>Building material and garden supply stores</td>
<td>32.6%</td>
</tr>
<tr>
<td>Furniture and related product manufacturing</td>
<td>29.5%</td>
</tr>
<tr>
<td>Professional and technical services</td>
<td>26.0%</td>
</tr>
<tr>
<td>Administrative and support services</td>
<td>25.6%</td>
</tr>
<tr>
<td>Merchant wholesalers, durable goods</td>
<td>24.2%</td>
</tr>
<tr>
<td>Waste management and remediation service</td>
<td>20.9%</td>
</tr>
<tr>
<td>Management of companies and enterprises</td>
<td>20.1%</td>
</tr>
<tr>
<td>ISPs, search portals, and data processing</td>
<td>20.0%</td>
</tr>
<tr>
<td>Mining, except oil and gas</td>
<td>19.2%</td>
</tr>
</tbody>
</table>

3. **Students**

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

Students who will be attracted to this program will come from a pool of students with Associate degree from across the state and region. The program will appeal to currently working students with Associate degree who want to advance their career goal within the organization. The program will appeal to students who hold Associates degrees in technical, non-technical, Business, and other related areas. Anticipated enrollment appears below.

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enrollment: 15 Year one 10 students</td>
<td>Enrollment: 15 Year one 10 students</td>
<td>Enrollment: 25 Year one 10 year 2 students</td>
<td>Enrollment: 25 Year one students 10 year 2 students</td>
<td>Enrollment: 30 Year one students 25 year 2 students</td>
</tr>
<tr>
<td></td>
<td>Graduates: 0</td>
<td>Graduates: 10</td>
<td>Graduates: 12</td>
<td>Graduates: 21</td>
<td>Graduates: 21</td>
</tr>
</tbody>
</table>

Intensive targeted marketing will be directed to business and industry. Recruiting efforts will be widespread and personalized to attract a large pool of applicants.

4. **Accreditation**

Describe plan for achieving program accreditation.

There is no accreditation body for this type of certificate program.
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 instructional needs for this certificate program are met within the existing resources at Northwestern State University. All the courses required to attain the certificate are currently being taught. There are no additional faculty, facilities, equipment, and library resources required. The department of engineering technology will deliver and oversee the Post-Associate Certificate in Quality Control.

The table below provides a summary of the credentials of some of the faculty who may teach courses in the proposed program.

<table>
<thead>
<tr>
<th>Name</th>
<th>Areas of Specialized Competence Related to the Program</th>
<th>Relevant Publications (as well as direction of theses and dissertations)</th>
</tr>
</thead>
</table>


Dissertation topic: Simulation of random set covering problems with known optimal solutions and explicitly induced correlation among coefficients.

Marcia Hardy
Industrial & Organizational Psychology Generalist; Organizational Management; Strategic Management, Planning & Policy; Human Resources Management; Leadership; Supply Chain Management; Cost-Benefit Analyses/Opportunity Audits; Operations Management; EDI (Electronic Data Interchange); Research/Evaluation.


Perez-Mira, Dr. B., Hanson, Dr. B, Kilcoyne, Dr. M, Hanson, Dr. T, Wright, S., Champion, S., Parker, Dr. C. (Accepted November 19, 2014). Is it really worth the trouble? – Students perceptions of UDL Guidelines. Association of Business Information Systems. Federation of Business Disciplines (To be published March 2015.)

Kilcoyne, Dr. M, Hanson, Dr., Perez-Mira, Dr. B., Parker, Dr. C, McDonald, Dr. J., Champion, S., Hanson. Weaving Accreditation Standards throughout a Business School’s Curriculum. Specifically Communication Skills: A Pilot Study. Association of Business Communications. Federation of Business Disciplines. (To be published March 2015.)

REFEREED CONFERENCE/PRESENTATIONS:

Perez-Mira, Dr. B., Hanson, Dr. B, Kilcoyne, Dr. M, Hanson, Dr. T, Wright, S., Champion, S., Parker, Dr. C. (Accepted November 19, 2014). Is it really worth the trouble? – Students perceptions of UDL Guidelines. Federation of Business Disciplines (To be presented March 2015.)

Kilcoyne, Dr. M, Hanson, Dr., Perez-Mira, Dr. B., Parker, Dr. C, McDonald, Dr. J. S, Champion, S., Hanson. (Accepted 2015) Weaving Accreditation Standards throughout a Business School’s Curriculum, Specifically Communication Skills: A Pilot Study. (To be published March 2015.)
<table>
<thead>
<tr>
<th>Weiwen Liao</th>
<th>International Business, Entrepreneurship, Strategic Management, Industry Clusters and Strategy</th>
</tr>
</thead>
</table>


**Funded Research:**

1. 2008~2009 Growth Path and Development Policy for Hunan Animation Industry Cluster: A View from the Global Value Chain, funded by Social Science Research Funding of Hunan Province, China.


3. Evaluation Committee of Social Science Research of Hunan Province, China.

4. 2008~2009 Growth Path of Industrial Clusters Based on Value Network, funded by Central South University (China).

**Book and Book Chapters:**

- Development of International Animation Industry (author). Hunan People’s Publishing House, Changsha, China, 2009

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**Mark Swanston**  
**Economic and Finance**

<table>
<thead>
<tr>
<th>Journals Papers</th>
</tr>
</thead>
</table>

**Selected Conference Presentation:**


10. “Picking Winners Using Discriminant Analysis.” Presented at the Academy of
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).

Since all the courses are currently being offered, there will be no need for additional appropriations.

CERTIFICATIONS:

Primary Administrator for Proposed Certificate                   Date 8/1/15

Provost/Chief Academic Officer

Management Board/System Office

Date
**SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR PROPOSED CERTIFICATE**

**Institution:** Northwestern State University  
**Date:** 8/10/2015

Certificate Program, Unit: Post-Associate Certificate in Quality Control, Department of Engineering Technology  
FTE = Full Time Equivalent (use the institution’s standard definition and provide that definition).

### EXPENDITURES

<table>
<thead>
<tr>
<th></th>
<th>FIRST YEAR</th>
<th></th>
<th>SECOND YEAR</th>
<th></th>
<th>THIRD YEAR</th>
<th></th>
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<td>Faculty</td>
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<td>0</td>
<td>$0</td>
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<tr>
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### FACILITIES

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<tr>
<td>SUB-TOTAL</td>
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### GRAND TOTAL EXPENSES

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### REVENUES

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<tr>
<th>Amount &amp; Percentage of Total Anticipated From:</th>
<th>AMOUNT</th>
<th>%</th>
<th>AMOUNT</th>
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<th>AMOUNT</th>
<th>%</th>
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<td>Tuition</td>
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<td>100%</td>
<td>$73,125</td>
<td>100%</td>
<td>$102,375</td>
<td>100%</td>
<td>$131,625</td>
<td>100%</td>
</tr>
<tr>
<td>Fees</td>
<td>$0</td>
<td>0%</td>
<td>$0</td>
<td>0%</td>
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<td>0%</td>
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<td>0%</td>
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</tr>
<tr>
<td>TOTAL</td>
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<td>100%</td>
<td>$73125</td>
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<td>100%</td>
<td>$131,625</td>
<td>100%</td>
</tr>
</tbody>
</table>

EXECUTIVE SUMMARY

Northwestern State University requests approval to offer a Post Baccalaureate Certificate in Quality Control. The program will allow students with Baccalaureate degrees in any discipline to gain pertinent knowledge to apply project management techniques and principles to products, processes, or services in industrial environments. This would enable them to work as project managers or supervisors.

The proposed 18-credit-hour certificate program which will be delivered online and face-to-face will fulfill workforce needs that have grown as Louisiana has attracted many technical, manufacturing, and service-providing industries over the past five years. Courses will come from the School of Business and the Department of Engineering Technology.

This program aligns with the University’s role, scope, and mission in that Northwestern has long been committed to education and economic development in the region. For several years, the Department of Engineering Technology at Northwestern State University has been working with various manufacturing industries in northwest and central Louisiana. The Department also has close ties with the Manufacturing Managers Association of Central Louisiana. This organization and Northwestern’s alumni working in various technical, manufacturing, and service-providing industries have indicated the need for students with Baccalaureate degrees. Additionally, students holding baccalaureate degrees in non-technical areas will be able to broaden their scope for career advancement.

According to long-term projections for industrial production managers, the need for managers in industrial situations is 2,170 per year until 2022. In the Louisiana Workforce Commission’s (LWC) Five-Star Jobs listing, there are approximately 400 advertisements for inspectors, samplers, controllers, and industrial technician advertisements (accessed on 7/10/2015). With the proposed new certificate program, it is expected that students with a Baccalaureate degree and the proposed certificate will fill a number of inspector, sampler, controller, and supervisory positions in technical, manufacturing, and service-providing industries in the state. Additionally, the proposed PBC will help in expanding the pool of skilled and highly skilled workers in the field of quality management.
Executive Summary  
August 27, 2015  
Page 2

Since 1884, Northwestern State University has been committed to serving the needs of the region through economic development and partnerships. Partnerships with business and industry have increased dramatically over the last five years and, at present, Northwestern State University has partnered with local, regional, and national businesses and industry leaders from a vast array of disciplines ranging from accounting firms to industrial plants to retail and restaurant businesses. Manufacturing entities have expressed a need for skilled workers who possess relevant degrees or certificates. There is a rapidly growing need for quality inspectors and related professions in the state.

Enrollment will be comprised of students with Baccalaureate degrees throughout the region and state. Intensive targeted marketing will be directed to business and industry. Recruiting efforts will be widespread and personalized to attract a large pool of applicants. The University projects an enrollment of 15 students during the initial year of implementation and 30 students by year five. As well, it is projected that there will be 12 graduates in the second year and 21 by the fifth year.

The program will be offered in the College of Business and Social Sciences. Existing faculty will teach the courses for the proposed program. No additional facilities, equipment, or library resources will be required. Thus, there will be no need for additional appropriations.

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 Proposal for a Post Baccalaureate Certificate (PBC) in Quality Control.
August 11, 2015

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

Re: Proposal to Develop a New Academic Certificate Program:
    Post-Baccalaureate Certificate in Quality Control

Dear Dr. Woodley:

Northwestern State University is requesting this item be placed on the agenda for approval at the August 2015 Board Meeting:

    Northwestern is seeking approval of the Proposal to Develop a New Academic Certificate Program: Post-Baccalaureate Certificate in Quality Control.

Thank you for your consideration of this request.

Sincerely,

James B. Henderson
President

JBH/pc

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

Date: 8/10/21015

<table>
<thead>
<tr>
<th>Campus: Northwestern State University</th>
<th>Program: CIP, Certificate Designation, Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Contact Person &amp; Contact Info (if clarification is needed)</td>
<td></td>
</tr>
<tr>
<td>Dr. Lisa Abney <a href="mailto:abney@nsula.edu">abney@nsula.edu</a>, 318.357.5361</td>
<td></td>
</tr>
</tbody>
</table>

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.

The Post-Baccalaureate Certificate in Quality Control focuses on effective decision-making in technical, manufacturing, and service providing industries. The program will allow students with Baccalaureate degree in any discipline to gain pertinent knowledge to apply quality control techniques and principles to products, processes, or services in industrial environment thereby enabling them work as a quality supervisor or quality manager.

This eighteen-hour program which will be delivered online and face to face will fulfill workforce needs which have grown as Louisiana has attracted many technical, manufacturing, and service providing industries over the past five years. Courses will come from the School of Business and the Department of Engineering Technology. Students will enroll in the following courses; all of which are existing courses.

Required Courses (12 credit hours)

- Mathematics of Statistics (MATH 2050, 3 credit hours)

or Basic Business Statistics (BUAD 2120, 3 credit hours )

- Quality Control (IET 4720, 3 credit hours)
- Engineering Economics (IET 3570, 3 credit hours)
- Elements of Occupational Supervision (IET 4750, 3 credit hours)

Electives: (Take 2 electives, 6 credits hours)

- Technical Project Management (IET 3100, 3 credit hours)
- Production and Inventory Control (IET 4820, 3 credit hours)
- Intermediate Business Statistics (BUAD 3120, 3 credit hours)
- Business Law I (BUAD 3250, 3 credit hours)
- Database Systems (CIS 2980, 3 credit hours)
- Organization and Management (MGT 3220, credit hours)

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.

This program aligns with the University's role, scope, and mission in that Northwestern has long been committed to education and economic development in the region. For several years, the Department of Engineering Technology at Northwestern State University of Louisiana (NSU) has been working with various manufacturing industries in northwest and central Louisiana. The Department also has close ties with the Manufacturing Managers Association of Central Louisiana. This organization and our alumni working in various technical, manufacturing, and service providing industries have indicated the need for students with Baccalaureate degree, a pathway to advance their career within their work environment. The proposed Post-Baccalaureate Certificate in Quality program provides such opportunities to the students. Additionally, students desiring to broaden their scope for career advancement but have Baccalaureate degree in non-technical area will also have opportunity to excel in their careers in technical field and achieve their aspirations.

According to long term projections for industrial production managers, the need for managers in industrial situations is 2170/year until 2022. In the Louisiana Workforce Commission's (LWC) Five-Star Jobs listing, there are approximately 400 advertisements for inspector, samplers, controller, and industrial technician advertisements (accessed on 7/10/2015). With this proposed new certificate program, it is expected that students with Baccalaureate degree and
the proposed certificate will fill a number of inspector, sampler, controller and supervisory positions in technical, manufacturing, and service providing industries in the State. Additionally this program will help in expanding the pool of skilled and highly skilled workers in the field of quality management in the State.

The Louisiana Workforce Commission projects major growth in the Northwest Region in the following industries. Since each type of industry requires to maintain and improve quality of their product, process and services, needs skilled and highly skilled workers knowledgeable in the respective field. This proposed program provides coursework in maintaining and improving quality. There are no similar programs in the state of Louisiana. This certificate program will provide opportunities for advancement to current employees as well as a chance for other workers to gain entry to high-paying jobs markets.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Growth 2010-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary metal manufacturing</td>
<td>177.8%</td>
</tr>
<tr>
<td>Transportation equipment manufacturing</td>
<td>68.8%</td>
</tr>
<tr>
<td>Pipeline transportation</td>
<td>50.0%</td>
</tr>
<tr>
<td>Merchant wholesalers, nondurable goods</td>
<td>32.7%</td>
</tr>
<tr>
<td>Building material and garden supply stores</td>
<td>32.6%</td>
</tr>
<tr>
<td>Furniture and related product manufacturing</td>
<td>29.5%</td>
</tr>
<tr>
<td>Professional and technical services</td>
<td>26.0%</td>
</tr>
<tr>
<td>Administrative and support services</td>
<td>25.6%</td>
</tr>
<tr>
<td>Merchant wholesalers, durable goods</td>
<td>24.2%</td>
</tr>
<tr>
<td>Waste management and remediation service</td>
<td>20.9%</td>
</tr>
<tr>
<td>Management of companies and enterprises</td>
<td>20.1%</td>
</tr>
<tr>
<td>ISPs, search portals, and data processing</td>
<td>20.0%</td>
</tr>
<tr>
<td>Mining, except oil and gas</td>
<td>19.2%</td>
</tr>
</tbody>
</table>

3. Students

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

Students who will be attracted to this program will come from a pool of students with Associate degree from across the state and region. The program will appeal to currently working students with Associate degree who want to advance their career goal within the organization. The program will appeal to students who hold Associates degrees in technical, non-technical, Business, and other related areas. Anticipated enrollment appears below.

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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<tbody>
<tr>
<td>Enrollment: 15 Year 10 students</td>
<td></td>
<td>Enrollment: 15 Year 10 students</td>
<td></td>
<td>Enrollment: 25 Year 10 year 2 students</td>
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<tr>
<td>Graduates: 0</td>
<td>Enrollment: 25 Year 10 year 2 students</td>
<td></td>
<td>Graduates: 10</td>
<td>Enrollment: 25 Year 10 year 2 students</td>
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<tr>
<td>Graduates: 10</td>
<td>Graduates: 12</td>
<td>Graduates: 21</td>
<td></td>
<td>Graduates: 21</td>
<td>Graduates: 21</td>
</tr>
</tbody>
</table>

Intensive targeted marketing will be directed to business and industry. Recruiting efforts will be widespread and personalized to attract a large pool of applicants.
4. Accreditation
Describe plan for achieving program accreditation.

There is no accreditation body for this type of certificate program.

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 instructional needs for this certificate program are met within the existing resources at Northwestern State University. All the courses required to attain the certificate are currently being taught. There are no additional faculty, facilities, equipment, and library resources required. The department of engineering technology will deliver and oversee the Post- Baccalaureate Certificate in Quality Control.

The table below provides a summary of the credentials of some of the faculty who may teach courses in the proposed program.

<table>
<thead>
<tr>
<th>Name</th>
<th>Areas of Specialized Competence Related to the Program</th>
<th>Relevant Publications (as well as direction of theses and dissertations)</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Major Areas</td>
<td>Journals Papers</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tbody>
</table>
| Marcia Hardy   | Industrial & Organizational Psychology Generalist; Organizational Management; Strategic Management, Planning | 1. Hardy, M. "Foundation Anchors for Management as a Calling". Federation of Business Disciplines (FBD) Southwest Academy of Management (SWAM)
<table>
<thead>
<tr>
<th>Carmella Parker</th>
<th>International Business, Entrepreneurship, Strategic Management, Industry Clusters and Strategy</th>
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Dissertation Research: "Entrepreneurship: Characteristics Associated with Entrepreneurial Success and Perception of Success", UCLA, 1990. Published by UMI.

Perez-Mira, Dr. B., Hanson, Dr. B. Kilcoyne, Dr. M. Hanson, Dr. T. Wright, S., Champion, S., Parker, Dr. C. (Accepted November 19, 2014). Is it really worth the trouble? – Students perceptions of UDL Guidelines. Association of Business Information Systems. Federation of Business Disciplines (To be published March 2015.)

Kilcoyne, Dr. M, Hanson, Dr., Perez-Mira, Dr. B., Parker, Dr. C, McDonald, Dr. J., Champion, S., Hanson. Weaving Accreditation Standards throughout a Business School’s Curriculum, Specifically Communication Skills: A Pilot Study. Association of Business Communications. Federation of Business Disciplines. (To be published March 2015.)

**REFEREED CONFERENCE/PRESENTATIONS:**

Perez-Mira, Dr. B., Hanson, Dr. B. Kilcoyne, Dr. M. Hanson, Dr. T. Wright, S., Champion, S., Parker, Dr. C. (Accepted November 19, 2014). Is it really worth the trouble? – Students perceptions of UDL Guidelines. Federation of Business Disciplines (To be presented March 2015.)
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary focus of legal practice:</strong> Risk Litigation/Insurance Defense</td>
</tr>
<tr>
<td>Multiple filed documents into various courts regarding general liability, workers' compensation, road hazard. Examples of such filings are the following:</td>
</tr>
<tr>
<td>• Applications for Supervisory Writs</td>
</tr>
<tr>
<td>• Responses to Applications for Supervisory Writs</td>
</tr>
<tr>
<td>• Reply to Responses to Applications for Supervisory Writs</td>
</tr>
<tr>
<td>• Judgments</td>
</tr>
<tr>
<td><strong>Weiren Liao</strong></td>
</tr>
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</table>
Industry Cluster in Dongguan", Finance and Economy, August 2007, China.

Funded Research:

1. 2008~2009 Growth Path and Development Policy for Hunan Animation Industry Cluster: A View from the Global Value Chain, funded by Social Science Research Funding of Hunan Province, China.
3. 2008~2009 Growth Path of Industrial Clusters Based on Value Network, funded by Central South University (China).

Book and Book Chapters:

Development of International Animation Industry (author). Hunan People’s Publishing House, Changsha, China, 2009

Mark Swanstron  Economic and Finance

Journals Papers


Selected Conference Presentation:


2. "Do Executives Understand Really Dirty Surplus?" Presented at the Mustang Academic Conference in Dallas, TX on Oct 25, 2013


8. "Playoffs vs. the BCS: Which Method Does the Best Job of Determining the National Champion." Co-authored with Charlie Penrod. Presented at the Society of
Business, Industry, and Economics
Conference in Destin, FL on April 14, 2011.
9. "Mergers and Acquisitions: A Model to
Assess the Post-Acquisition Success Rate."
Presented at the Academy of Economics
and Finance Conference in Houston, Texas
on February 12, 2010.
10. "Picking Winners Using Discriminant
Analysis." Presented at the Academy of
Economics and Finance Conference in
Houston, Texas on February 12, 2010.

Certifications
1. Insurance License for Life/Health and
   Property/Casualty
2. Chartered Financial Analyst

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).

Since all the courses are currently being offered, there will be no need for additional appropriations.

CERTIFICATIONS:

[Signatures and dates]

Primary Administrator for Proposed Certificate

Provost/Chief Academic Officer

Management Board/System Office
**SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR PROPOSED CERTIFICATE**

Institution: Northwestern State University  
Date: 8/10/2015  

Certificate Program, Unit: Post-Baccalaureate Certificate in Quality Control, Department of Engineering Technology  
FTE = Full Time Equivalent (use the institution’s standard definition and provide that definition).

### EXPENDITURES

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<th>SECOND YEAR</th>
<th>THIRD YEAR</th>
<th>FOURTH YEAR</th>
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<td>Faculty</td>
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<td>$0</td>
<td>0%</td>
<td>$0</td>
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</tr>
<tr>
<td>Other (specify)</td>
<td>$0</td>
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<td>$0</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$43,875</strong></td>
<td><strong>100%</strong></td>
<td><strong>$73,125</strong></td>
<td><strong>100%</strong></td>
<td><strong>$102,375</strong></td>
<td><strong>100%</strong></td>
<td><strong>$131,625</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Item E.7. Northwestern State University's request for approval of a Proposal for a Post Associate Certificate in Project Management.

EXECUTIVE SUMMARY

Northwestern State University requests approval to offer a Post Associate Certificate in Project Management. The proposed certificate will focus on effective decision-making in technical, manufacturing, and service-providing industries. Students will gain pertinent knowledge to apply quality control techniques and principles to products, processes, or services in industrial environments.

The proposed 18-hour program will be delivered online and in a traditional format. The program will allow students with associate degrees in any discipline to gain pertinent knowledge to apply project management techniques and principles to products, processes, or services in industrial environment thereby enabling them to work as project managers or supervisors. The development of a Post Associate Certificate in Project Management will fulfill workforce needs that have grown as Louisiana has attracted many technical, manufacturing, and service-providing industries over the past five years. Courses will come from the School of Business and the Department of Engineering Technology.

The proposed Post Associate Certificate in Project Management program provides opportunities to the students in various technical, manufacturing, and service-providing industries. Additionally, students desiring to broaden their scope for career advancement but who have an associate degree in a non-technical area will also have the opportunity to excel in their careers in a technical field and achieve their aspiration. The University projects an enrollment of 15 students during the initial year of implementation and 30 students by year five. As well, it is projected that there will be 12 graduates in the second year and 21 by the fifth year.

According to long-term projections for industrial production managers, the need for managers in industrial situations is 2,170 per year until 2022. In the Louisiana Workforce Commission’s (LWC) Five-Star Jobs listing, there are approximately 300 advertisements for supervisors, inspectors, controllers, and industrial technician advertisements (accessed on 7/14/15). With the proposed certificate program, it is expected that students with an associate degree and the proposed certificate will fill a number of project management-related skilled personnel positions, controller and other supervisory positions in technical, manufacturing, and service providing industries in the State. Additionally this program will help in expanding the pool of skilled and highly skilled workers in the field of quality management in the state.
Implementation of this certificate will enhance the state’s skilled and highly skilled workforce base, which is one of the factors to attract new business and industry in Louisiana. New industries are more likely to locate where the required workforce is easily available and to this date Louisiana’s adult population still ranks fairly low in terms of technical degrees or certificates held.

The program will be offered in the College of Business and Social Sciences. Existing faculty will teach the courses for the proposed program. No additional facilities, equipment, or library resources will be required. Thus, there will be no need for additional appropriations.

**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 Proposal for a Post Associate Certificate in Project Management.
July 14, 2015

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

Re: Letter of Intent: Post-Associate Certificate in Project Management

Dear Dr. Woodley:

Northwestern State University is requesting this item be placed on the agenda for approval at the August 2015 Board Meeting:

Northwestern is seeking approval of the Letter of Intent to offer a Post-Associate Certificate in Project Management.

Thank you for your consideration of this request.

Sincerely,

[Signature]

James B. Henderson
President

JBH/pc

Attachment
LETTER OF INTENT to DEVELOP a NEW ACADEMIC PROGRAM  [Sept 2011]

<table>
<thead>
<tr>
<th>General Information</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus: Northwestern State University</td>
<td>Program: Title, CIP, Degree/Certificate Awarded Post-Associate Certificate in Project Management, 52.021</td>
</tr>
<tr>
<td>Institutional Contact Person &amp; Access Info (if clarification is needed):</td>
<td></td>
</tr>
<tr>
<td>Dr. Lisa Abney</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:abney@nsula.edu">abney@nsula.edu</a>, 318.357.5361</td>
<td></td>
</tr>
</tbody>
</table>

1. Program Objectives and Content

Describe the program concept: purpose and objectives; basic structure and components/concentrations; etc.

The Post-Associate Certificate in Project Management focuses on effective decision-making in technical, manufacturing, and service providing industries. The program will allow students with Associate degree in any discipline to gain pertinent knowledge to apply project management techniques and principles to products, processes, or services in industrial environment thereby enabling them work as project managers or supervisors.

This 18-hour program which will be delivered online and face to face will fulfill workforce needs which have grown as Louisiana has attracted many technical, manufacturing, and service providing industries over the past five years. Courses will come from the School of Business and the Department of Engineering Technology. Students will enroll in the following courses; all of which are existing courses.

**Required Courses (12 credit hours)**
- Technical Project Management (IET 3100, 3 credit hours)
- Elements of Occupational Supervision (IET4750, 3 credit hours)
- Engineering Economics (IET 3570, 3 credit hours)
- Introduction to Information Technology (BUAD 1800, 3 credit hours)

**Electives: (Take 2 electives, 6 credits hours)**
- Production and Inventory Control (IET 4820, 3 credit hours)
- Business Reports and Communications (BUAD 2200, 3 credit hours)
- Business Law I (BUAD 3250, 3 credit hours)
- Organization and Management (MGT 3220, credit hours)
- Quality Control (IET 4720,3 credit hours)
- Spreadsheet Applications (CIS 2000, 3 credit hours)

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, etc.

This program aligns with the University’s role, scope, and mission in that Northwestern has long been committed to education and economic development in the region. For several years, the School of Business and Technology at Northwestern State University of Louisiana (NSU) has been working with various manufacturing industries in northwest and central Louisiana. The school also has close ties with the Manufacturing Managers Association of Central Louisiana.
This organization and our alumni working in various technical, manufacturing, and service providing industries have indicated the need for students with Associate degree, a pathway to advance their career within their work environment. The proposed Post-Associate Certificate in Project Management program provides such opportunities to the students. Additionally, students desiring to broaden their scope for career advancement but have Associate degree in non-technical area will also have opportunity to excel in their careers in technical field and achieve their aspirations.

According to long term projections for industrial production managers, the need for managers in industrial situations is 2,170/year until 2022. In the Louisiana Workforce Commission's (LWC) Five-Star Jobs listing, there are approximately 300 advertisements for supervisors, inspectors, controllers, and industrial technician advertisements (accessed on 7/14/2015). With this proposed new certificate program, it is expected that students with Associate degree and the proposed certificate will fill a number of project management related skilled personnel positions, controller and other supervisory positions in technical, manufacturing, and service providing industries in the State. Additionally this program will help in expanding the pool of skilled and highly skilled workers in the field of quality management in the State.

The Louisiana Workforce Commission projects major growth in the Northwest Region in the following industries. Since each type of industry requires to maintain and improve quality of their product, process and services, needs skilled and highly skilled workers knowledgeable in the respective field. This proposed program provides coursework in maintaining and improving quality. This certificate program will provide opportunities for advancement to current employees as well as a chance for other workers to gain entry to high-paying jobs markets.

<table>
<thead>
<tr>
<th>Industry</th>
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<tr>
<td>Merchant wholesalers, durable goods</td>
<td>24.2%</td>
</tr>
<tr>
<td>Waste management and remediation service</td>
<td>20.9%</td>
</tr>
<tr>
<td>Management of companies and enterprises</td>
<td>20.1%</td>
</tr>
<tr>
<td>ISPs, search portals, and data processing</td>
<td>20.0%</td>
</tr>
<tr>
<td>Mining, except oil and gas</td>
<td>19.2%</td>
</tr>
</tbody>
</table>
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 of the state’s adult population or foster innovation through research.

Since 1884, Northwestern State University has been committed to serving the needs of the region through economic development and partnerships. Partnerships with business and industry have increased dramatically over the last five years, and at present, Northwestern State University has partnered with local/regional, and national businesses and industry leaders from a vast array of disciplines ranging from accounting firms to industrial plants to retail and restaurant businesses. Over the last few years, the University has heard repeatedly from manufacturing entities that they need skilled workers who hold relevant degrees or certificate. There is a rapidly growing need for quality inspector and related profession in the State. With the expansion of manufacturing entities in the State, now is the time for important degrees such as this one to be implemented.

As has been indicated in Section 2, implementation of this certificate will enhance the State’s skilled and highly skilled work force base which is one of the factors to attract new business and industry in Louisiana. New industries are more likely to locate where the required workforce is easily available and to this date Louisiana’s adult population still ranks fairly low in terms of technical degrees or certificate held, and this certificate would make earning an attainable dream for those who wish to pursue it.

Students with Associate degree in general studies or other non-technical field, who are interested to join the technical workforce pool and keep aspiration to high paying technical job, this Post- Associate Certificate in Project Management will open new door and hope for their career goal.

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

Students who will be attracted to this program will come from a pool of students with Associate degree from across the state and region. The program will appeal to currently working students with Associate degree who want to advance their career goal within the organization. The program will appeal to students who hold Associates degrees in technical, non-technical, Business, and other related areas. Anticipated enrollment appears below.

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Intensive targeted marketing will be directed to business and industry. Recruiting efforts will be widespread and personalized to attract a large pool of applicants.
5. Cost

Estimate costs for the projected program for the first five years. Indicate amounts to be
adsorbed out of current sources of revenue and needs for additional appropriations (if any).
Commit to provide adequate funding to initiate and sustain the program.

Since all the courses are currently being offered, there will be no need for additional
appropriations.

CERTIFICATION:

Chief Academic Officer

Date

Chancellor/President

Date

Management Board

Date
BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 27, 2015


EXECUTIVE SUMMARY

Northwestern State University requests approval to offer a Post Baccalaureate Certificate in Project Management. The program will allow students with Bachelor’s degrees in any discipline to gain pertinent knowledge to apply project management techniques and principles to products, processes, or services in industrial environments. This would enable them to work as project managers or supervisors.

The proposed 18-hour certificate program will be delivered online and face-to-face. The PBC will fulfill workforce needs that have grown as Louisiana has attracted many technical, manufacturing, and service-providing industries over the past five years. Courses will come from the School of Business and the Department of Engineering Technology. The proposed Certificate delivers coursework in maintaining and improving quality. This program will provide opportunities for advancement to current employees as well as a chance for other workers to gain entry to high-paying jobs markets.

For several years, the School of Business and Technology at Northwestern State University has been working with various manufacturing industries in northwest and central Louisiana. The school also has close ties with the Manufacturing Managers Association of Central Louisiana. This organization and alumni working in various technical, manufacturing, and service-providing industries have indicated the need for students with baccalaureate degrees to have a pathway to advance their careers within their work environment. Additionally, students desiring to broaden their scope for career advancement but who have baccalaureate degrees in non-technical areas will also have the opportunity to excel in their careers in technical fields and achieve their aspirations.

According to long-term projections for industrial production managers, the need for managers in industrial situations is 2,170 per year until 2022. In the Louisiana Workforce Commission’s (LWC) Five-Star Jobs listing, there are approximately 300 advertisements for supervisors, inspectors, controllers, and industrial technician advertisements (accessed on 7/14/15). With this proposed new certificate program, it is expected that students with a baccalaureate degree and the proposed certificate will fill a number of project management related skilled personnel positions, controller and other supervisory positions in technical,
manufacturing, and service-providing industries in the state. Additionally, this program will help in expanding the pool of skilled and highly skilled workers in the field of quality management.

The University projects an enrollment of 15 students during the initial year of implementation and 30 students by year five. As well, it is projected that there will be 12 graduates in the second year and 21 by the fifth year. The program will be offered in the College of Business and Social Sciences. Existing faculty will teach the courses for the proposed program. No additional facilities, equipment, or library resources will be required. Thus, there will be no need for additional appropriations.

**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 Proposal for a Post Baccalaureate Certificate (PBC) in Project Management.**
August 11, 2015

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

Re:   Proposal to Develop a New Academic Certificate Program:
      Post-Baccalaureate Certificate in Project Management

Dear Dr. Woodley:

Northwestern State University is requesting this item be placed on the agenda for approval at the August 2015 Board Meeting:

Northwestern is seeking approval of the Proposal to Develop a New Academic Certificate Program: Post-Baccalaureate Certificate in Project Management.

Thank you for your consideration of this request.

Sincerely,

James B. Henderson
President

JBH/pc

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

Date: 8/10/2015

<table>
<thead>
<tr>
<th>Campus: Northwestern State University</th>
<th>Program: CIP, Certificate Designation, Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>52.0211 PBC, Post-Baccalaureate Certificate in Project Management</td>
</tr>
</tbody>
</table>

Institutional Contact Person & Contact Info (if clarification is needed)
Dr. Lisa Abney
abby@nsula.edu, 318.357.5361

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.

The Post-Baccalaureate Certificate in Project Management focuses on effective decision-making in technical, manufacturing, and service providing industries. The program will allow students with Baccalaureate degree in any discipline to gain pertinent knowledge to apply project management techniques and principles to products, processes, or services in industrial environment thereby enabling them work as project managers or supervisors.

This 18-hour program which will be delivered online and face to face will fulfill workforce needs which have grown as Louisiana has attracted many technical, manufacturing, and service providing industries over the past five years. Courses will come from the School of Business and the Department of Engineering Technology. Students will enroll in the following courses; all of which are existing courses.

Required Courses (12 credit hours)
- Technical Project Management (IET 3100, 3 credit hours)
- Elements of Occupational Supervision (IET4750, 3 credit hours)
- Engineering Economics (IET 3570, 3 credit hours)
- Office Productivity Software I (BUAD 2180, 3 credit hours)

Electives: (Take 2 electives, 6 credits hours)
- Production and Inventory Control (IET 4820, 3 credit hours)
- Business Reports and Communications (BUAD 2200, 3 credit hours)
- Business Law I (BUAD 3250, 3 credit hours)
- Organization and Management (MGT 3220, credit hours)
- Quality Control (IET 4720, 3 credit hours)
- Office Productivity Software II (BUAD 2190, 3 credit hours)

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.

This program aligns with the University’s role, scope, and mission in that Northwestern has long been committed to education and economic development in the region. For several years, the School of Business and Technology at Northwestern State University of Louisiana (NSU) has been working with various manufacturing industries in northwest and central Louisiana. The school also has close ties with the Manufacturing Managers Association of Central Louisiana. This organization and our alumni working in various technical, manufacturing, and service providing industries have indicated the need for students with Baccalaureate degree, a pathway to advance their career within their work environment. The proposed Post-Baccalaureate Certificate in Project Management program provides such opportunities to the students. Additionally, students desiring to broaden their scope for career advancement but have baccalaureate degree in non-technical area will also have opportunity to excel in their careers in technical field and achieve their aspirations.

According to long term projections for industrial production managers, the need for managers in industrial situations is 2170/year until 2022. In the Louisiana Workforce Commission’s (LWC) Five-Star Jobs listing, there are approximately 300 advertisements for supervisors, inspectors, controller, and industrial technician advertisements (accessed on 7/14/2015). With this proposed new certificate program, it is expected that students with baccalaureate degree and the proposed certificate will fill a number of project management related skilled personnel positions, controller and other supervisory positions in technical, manufacturing, and service providing industries in the State. Additionally this program will help in expanding the pool of skilled and highly skilled workers in the field of quality management in the State.

The Louisiana Workforce Commission projects major growth in the Northwest Region in the following industries. Since each type
of industry requires to maintain and improve quality of their product, process and services, needs skilled and highly skilled workers knowledgeable in the respective field. This proposed program provides coursework in maintaining and improving quality. There are no similar programs in the state of Louisiana. This certificate program will provide opportunities for advancement to current employees as well as a chance for other workers to gain entry to high-paying jobs markets.

Table 1: LWC growth areas

<table>
<thead>
<tr>
<th>Industry</th>
<th>Growth 2010-2020</th>
</tr>
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<tbody>
<tr>
<td>Primary metal manufacturing</td>
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<td>20.0%</td>
</tr>
<tr>
<td>Mining, except oil and gas</td>
<td>19.2%</td>
</tr>
</tbody>
</table>

3. Students

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

Students who will be attracted to this program will come from a pool of students with Associate degree from across the state and region. The program will appeal to currently working students with Associate degree who want to advance their career goal within the organization. The program will appeal to students who hold Associates degrees in technical, non-technical, Business, and other related areas. Anticipated enrollment appears below.

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
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</tbody>
</table>

Intensive targeted marketing will be directed to business and industry. Recruiting efforts will be widespread and personalized to attract a large pool of applicants.

4. Accreditation

Describe plan for achieving program accreditation.

There is no accreditation body for this type of certificate program.

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 instructional needs for this certificate program are met within the existing resources at Northwestern State University. All the courses required to attain the certificate are currently being taught. There are no additional faculty, facilities, equipment, and library resources required. The department of engineering technology will deliver and oversee the Post-Baccalaureate Certificate in Project Management.

The table below provides a summary of the credentials of some of the faculty who may teach courses in the proposed program.

<table>
<thead>
<tr>
<th>Name</th>
<th>Areas of Specialized Competence Related to the Program</th>
<th>Relevant Publications (as well as direction of theses and dissertations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ali Ahmad</td>
<td>Human Systems Integration,</td>
<td>Journals Papers</td>
</tr>
<tr>
<td></td>
<td>Simulation of Interactive Systems.</td>
<td>of the 2014 International Conference on Industrial Engineering and</td>
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<td></td>
<td></td>
<td>Operations Management, Bali, Indonesia, January 7 – 9, 2014.</td>
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<td>International Conference on Industrial Engineering and Operations</td>
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<td>Management, Bali, Indonesia, January 7 – 9, 2014.</td>
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<tr>
<td></td>
<td></td>
<td>Development and Evaluation of Virtual Assembly Trainer. In Proceedings</td>
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<td>of Human Factors and Ergonomics Society 56th Annual Meeting, Boston,</td>
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<td></td>
<td></td>
<td>US, pp. 2560-2564.</td>
</tr>
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<td></td>
<td></td>
<td>Assembly Simulation. The 2012 International conference on Industry,</td>
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<td>Engineering and Management Systems (IEMS). Cocoa, FL.</td>
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<td>The 2012 International conference on Industry, Engineering and</td>
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<td>Reduction Using Monte Carlo Simulation. The 2012 International</td>
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<td></td>
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<td></td>
<td></td>
<td>Cocoa, FL.</td>
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<tr>
<td></td>
<td>Operations Management, soft computing, data</td>
<td>Temporal and Spatial Information Conveyance Principles.</td>
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<td></td>
<td>analysis and Simulation.</td>
<td>Journals Papers</td>
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<td>1. (Paper accepted Feb 2015), Sapkota, N., Karwowski, W and Ahram T.</td>
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<tr>
<td></td>
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<td>“Application of Evolving Self Organizing Maps for Analysis of Human</td>
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<td></td>
<td>Adverse Events in the Context of Complex Socio-Economic Infrastructure</td>
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<tr>
<td></td>
<td></td>
<td>Interactions”. Submitted in January 2014 to IEEE Transactions on</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Human-Machine Systems, ref number SMCA-14-0013.</td>
</tr>
<tr>
<td></td>
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<td>Discrete Bivariate Distributions With Uniform Marginals for Simulating</td>
</tr>
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<td></td>
<td></td>
<td>Realistic and Challenging Optimization-Problem Instances”. European</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Journal of Operational Research. DOI: 10.1016/j.ejor.2014.09.037</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Khaled, T., Karwowski,</td>
</tr>
</tbody>
</table>
Marcia Hardy  Industrial & Organizational Psychology Generalist; Organizational Management; Strategic Management, Planning & Policy; Human Resources Management; Leadership; Supply Chain Management; Cost-Benefit Analyses/Opportunity Audits; Operations Management; EDI (Electronic Data Interchange); Research/Evaluation.


Carmella Parker  International Business, Entrepreneurship, Strategic Management, Industry Clusters and Strategy

Perez-Mira, Dr. B.; Hanson, Dr. B.; Kilcoyne, Dr. M; Hanson, Dr. T; Wright, S.; Champion, S.; Parker, Dr. C. (Accepted November 19, 2014). Is it really worth the trouble? - Students perceptions of UDL Guidelines. Association of Business Information Systems. Federation of Business Disciplines (To be published March 2015.)

Kilcoyne, Dr. M; Hanson, Dr.; Perez-Mira, Dr. B.;
Parker, Dr. C, McDonald, Dr. J., Champion, S., Hanson. Weaving Accreditation Standards throughout a Business School’s Curriculum, Specifically Communication Skills: A Pilot Study. Association of Business Communications. Federation of Business Disciplines. (To be published March 2015.)

REFEREED CONFERENCE/PRESENTATIONS:

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Primary focus of legal practice: Risk Litigation/Insurance Defense

Multiple filed documents into various courts regarding general liability, workers’ compensation, road hazard. Examples of such filings are the following:

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- Responses to Applications for Supervisory Writs
- Reply to Responses to Applications for Supervisory Writs
- Judgments

Weiwen Liao

International Business, Entrepreneurship, Strategic Management, Industry Clusters and Strategy


Funded Research:

1. 2008–2009 Growth Path and Development Policy for Hunan Animation Industry Cluster: A View from the Global Value Chain, funded by Social Science Research Funding of Hunan Province, China

2. 2008–2009 Growth Strategy of Hunan Animation Industry Cluster, funded by Evaluation Committee of Social Science Research of Hunan Province, China

3. 2008–2009 Growth Path of Industrial Clusters Based on Value Network, funded by Central South University (China).

Book and Book Chapters:

Development of International Animation Industry (author). Hunan People's Publishing House, Changsha, China, 2009

Mark Swanston  Economic and Finance

Journals Papers


2. "Champion


Selected Conference Presentation:


Certifications
1. Insurance License for Life/Health and Property/Casualty
2. Chartered Financial Analyst

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).

Since all the courses are currently being offered, there will be no need for additional appropriations.

CERTIFICATIONS:

Primary Administrator for Proposed Certificate

Provost/Chief Academic Officer

Management Board/System Office

Date

8/11/15

Date

Date
## SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR PROPOSED CERTIFICATE

Institution: Northwestern State University  Date: 8/10/2015

Certificate Program, Unit: Post-Baccalaureate Certificate in Project Management, Department of Engineering Technology

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

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<th>EXPENDITURES</th>
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<td>Supplies</td>
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## REVENUES

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<th>%</th>
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<td><strong>100%</strong></td>
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</table>
Item E.9. **Northwestern State University**’s request for approval of a Proposal for a Post Baccalaureate Certificate (PBC) in Business Analytics.

**EXECUTIVE SUMMARY**

Northwestern State University requests approval to offer a Post Baccalaureate Certificate in Business Analytics. The proposed program will provide training on basic business analytics to students to help bridge the gap between the skills of the current workforce and the needs of industry. This 18-hour certification program will be delivered online and face-to-face. The proposed certificate program will be offered to students who possess a Baccalaureate degree.

The program is an institutional priority as it provides further opportunities in areas which are being highlighted as key workforce needs. Sophisticated databases and other systems in business require employees to analyze data and utilize the data to make appropriate changes within an organization. According to the Bureau of Labor Statistics’ national employment projections, several top jobs that require at least a Baccalaureate degree are related to analysis. The proposed certification can help fill a need for analysts by providing analytical skills to students who are already in the workplace and wish to advance within their organizations.

Student interest is likely to come from the pool of recent graduates of Business and Computer Information Systems’ related fields, recent graduates of other baccalaureate programs, and employed individuals who have a baccalaureate. Most courses will be taught by existing faculty. However, an existing faculty member will be required to teach summer courses, which will result in additional costs. However, this will be offset by revenue generated from the proposed program. Current facilities, equipment, and library resources will be adequate. Thus, there will be no need for additional appropriations.

**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 Proposal for a Post Baccalaureate Certificate (PBC) in Business Analytics.
August 11, 2015

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

Re: Proposal to Develop a New Academic Certificate Program:  
Post-Baccalaureate Certificate in Business Analytics

Dear Dr. Woodley:

Northwestern State University is requesting this item be placed on the agenda for approval at the August 2015 Board Meeting:

Northwestern is seeking approval of the Proposal to Develop a New Academic Certificate Program: Post-Baccalaureate Certificate in Business Analytics.

Thank you for your consideration of this request.

Sincerely,

[Signature]

James B. Henderson  
President

JBH/pc

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

Date: 8/10/2015

Campus: Northwestern State University-Natchitoches
Program: CIP, Certificate Designation, Title
PBC in Business Analytics (521301)

Institutional Contact Person & Contact info (if clarification is needed)
Coordinator of Computer Information Systems and Assistant Professor, School of Business,
318-357-5033

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.

The purpose of this program is to provide training in basic business analytics to students to help bridge the gap between the skills of the current workforce and the needs of industry. Conversations with industry partners have reinforced the point that one of the key skillsets employees need is the ability to problem solve and think analytically. This 18-hour certification will help to increase the knowledge of completers in the area of problem-solving and analysis. Rather than have a student complete another baccalaureate degree or pursue a master’s degree, this certification seeks to let the student who is already in the workforce (or the student who is not in the workforce and needs to gain additional skills) take a very focused curriculum of classes.

As a post-baccalaureate certification, students will need to have already completed a baccalaureate degree. This certification will seek to either build on knowledge the student has already gained through their baccalaureate degree or provide the student new knowledge which can help them in their career. Once admitted, the student will take six undergraduate courses to complete the post-baccalaureate certification. While a baccalaureate degree will be the only admission standard, students will need certain knowledge (prerequisites) to take some of the courses. Thus, the student may need to take some foundational courses (see below listing) before he or she can take the courses contained in the 18-hour degree program.

To provide maximum flexibility to the working student, the certification will be offered online.

While courses will be reviewed as needed to maintain currency in the field, the initial courses planned for the certification are as follows:

1) CIS 4000 – Advanced Database Systems: Advanced topics and techniques of database system technology. Students will design and implement software components integral to database systems using a modern database management system (DBMS). Prerequisite: CIS 2980.

2) CIS 4070 – Data Analytics: This course provides an introduction to the field of data analytics, which can be defined as the extensive use of data, statistical and quantitative analysis, exploratory and predictive models, and fact-based management to drive decisions and actions. Data analytics is explored as a process of transforming data into actions through analysis and insights in the context of organizational decision making and problem solving. This course stresses the factors that impact the performance of business decision makers and the data management and analysis methods that add value to them. The application of selected data mining techniques to business decision making situations is illustrated. Students actively participate in the delivery of this course through case and project presentations. Prerequisites: CIS 2980, CIS 3300, and BUAD2120.

3) MGT 3580 – Operations Management: Principles of operations management applicable to manufacturing and service organizations. Topics include forecasting, product design, process planning, facilities layout and location, aggregate planning, inventory control, just-in-time manufacturing, MRP, quality control, scheduling, supply chain management, PERT/CPM, and other related topics. Prerequisite: Successful completion of MGT 3220 and BUAD2120 or MGT 3220 and SSTA3810.

4) MGT 4460 – Supply Chain Management: Principles of supply chain management applied to manufacturing and service organizations. Topics include supply chain planning – forecasting and inventory, supplier management, physical distribution, logistics, transportation, coordination in the supply chain, the purchasing process, and e-business and the supply chain. Prerequisites: MGT 3220, MKTG3230

5) MKTG4440 – Marketing Research: The academic and applied elements of marketing research, including modeling, sampling, survey, instrument design, data collection, computer-based data analysis and data presentation. Prerequisites: MKTG3230 and BUAD2120 or MKRG3230 and SSTA3810.

6) BUAD3120 – Intermediate Business Statistics: Time series, index numbers, analysis of variances, chi square, non-parametric tests applied to business and economic problems. Prerequisite: Successful completion of BUAD2120 or SSTA2810 and junior
standing.

OR

MGT 3500 – Management Science Techniques: Major statistical and quantitative techniques useful in modern management. Prerequisites: Successful completion of ACCT2000 and BUAD2120 or ACCT2000 and SSTA3810.

A student may have earned previous credit for up to 6 hours of the 18 hours. If a student already has credit for more than 6 hours of the certification, he or she may (with the School of Business' permission) take a topics course(s) on subject matter within the Business Analytics area to obtain the necessary hours.

Prerequisites (and prerequisites of prerequisites) for the required courses (which may be met by the baccalaureate degree or by taking the classes upon admittance) are as follows:


BUAD2120 – Basic Business Statistics: A basic statistical foundation is developed; emphasis is then placed upon practical business applications including hypothesis testing, ANOVA, contingency table analysis, and introductory regression analysis; material is related directly to business applications. Prerequisite: CIS 2000, MATH1020, and MATH1060.

BUAD2200 – Business Reports and Communication: Communication problems, business letters, employment application procedures. Problem areas investigated by research procedures; sources of data, compilation and arrangement of data, documentation, bibliography, and effective presentation. Prerequisite: BUAD1800 or equivalent. ENGL1010, 1020.

CIS 1030 – Introduction to Software Development: An introduction to software development to include: an introduction to database and file concepts; an introduction to techniques and methods used in making decisions with data; and introduction to visual and object-oriented programming and design concepts. Prerequisite or co-requisite: CIS 1015. (We would waive this requirement for the PBC in Business Analytics students.)

CIS 2000 – Spreadsheet Applications: This course is designed to assist students in preparing for the MOS (Microsoft Office Specialist) Excel Certification. Attention is given to developing skills in spreadsheet applications including data exchange between other types of applications.

CIS 2980 – Database Systems: Study of the design, implementation, and management of database systems in a business environment. Topics include data modeling, normalization and the utilization of a relational database management system to develop an integrated database application. A certification exam will be required as a part of the course assignment. The student does not have to pass the certification exam to pass the course. Prerequisite: CIS 1015 or consent of instructor.

CIS 3300 – Intermediate Object-Oriented Programming: An intermediate course in object-oriented programming using the Java programming language. The course explores the basic constructs and syntax of the language, including data types, control statements, methods, arrays, classes, and objects. Students will develop programs to solve a variety of problems in math, science, business, and gaming. Students will perform laboratory-based activities to demonstrate programming proficiency. Prerequisite: CIS 1030

ECON2010 – Principles of Microeconomics: A survey of economic principles governing the behavior of individual households and business firms and the markets for specific goods. It addresses the problems of how market prices influence the allocation of society’s scarce resources and the distribution of income among its members. Prerequisite: sophomore standing.

MGT 3220 – Organization and Management: Management processes and ethics, with focus on the management of people in organizations, their behavior, motivation, and interactions with management structure. Prerequisite: Junior standing and BUAD2200. A common body of knowledge course.

MKTG2320 – Principles of Marketing: Marketing functions, channels of distribution, marketing institutions, marketing analysis, price determination, marketing trends. Prerequisite: Junior standing, ECON2010, BUAD2200, or consent of instructor.

The certificate is designed to be completed within one year (assuming the student has met the prerequisites and is taking two classes a semester) based on the following current schedule:

Fall: CIS 4070 – Data Analytics, MGT 3580 – Operations Management
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 business world is in the midst of a large change in regards to analytics and business intelligence. Over the years, as databases and other systems have become larger and more prevalent, businesses and other organizations have started collecting more and more data. As time has passed, businesses/organizations have realized they have a treasure trove of data which is not being used to enhance the organization. Only a tiny portion of the data is utilized by the organization. Only a small amount of time is spent by managers on actually utilizing the data. Thus, employees with the skills to analyze data and use it to make changes in an organization are highly valued. These employees can contribute to the success of an organization which helps the state, region, and nation.

If one looks at the Bureau of Labor Statistics national employment projections, of the jobs which require at least a baccalaureate degree, several of the top 10 occupations with projected job openings through 2022 are related to analysis:

- #5 - Management Analysts - 245,200 jobs through 2022 with a median annual wage of $78,600
- #8 - Computer Systems Analysts - 209,600 jobs through 2022 with a median annual wage of $79,680
- #9 - Market Research Analysts and Marketing Specialists - 188,500 jobs through 2022 with a median annual wage of $60,300

The over 600,000 analyst jobs do not include occupations outside of the top 10 occupations with the highest number of job offerings nor does it address occupations such as “General and operations managers” with 613,100 jobs through 2022.

As another example of the demand for employees with analytical skills, one could go to the LAWorks website. On June 16, 2015, the LAWorks website was reviewed and the following information was found:

- Computer Systems Analysts - 5-star job - 197 advertised jobs
- Financial Analysts - 5-star job - 51 advertised jobs
- Management Analysts - 5-star job - 80 advertised jobs
- Market Research Analysts and Marketing Specialists - 5-star job - 56 advertised jobs
- Operations Research Analysts - 5-star job - 10 advertised jobs

Thus, only looking at 5-star jobs and only at jobs which expressly say “Analyst”, one can see as of June 16, 2015, the state of Louisiana had 394 positions open. Numerous other positions at different star levels and with different titles (such as Manager) would also have a need for the skills provide by this certification.

This certification can help fill a need for analysts by providing analytical skills to students who are already in the workplace and want to move into one of these areas or students who may have a baccalaureate degree, but are finding that degree did not prepare them for adequate career opportunities.

3. Students

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

Student interest/demand is likely to come from three sources: (1) recent graduates of Business/Computer Information Systems related fields, (2) recent graduates of other baccalaureate programs, or (3) people who have a baccalaureate degree and are already employed.

While NSU Business graduates will certainly be exposed to many of these concepts in their undergraduate career and the School of Business may develop a concentration within the undergraduate Business Administration or Computer Information Systems degree, some of these graduates may be interested in furthering their education. In 2013-14, according to the Board of Regents’ cmpplace.xls file, 108 degrees were awarded in the broader “Business, Management, Marketing, and Related Support Services” and “Computer and Information Sciences and Support Services” areas. As this degree would be online, the graduate market would be state and potentially world-wide. Focusing on the state, 3778 degrees were awarded in the broader “Business, Management, Marketing, and Related Support Services” and “Computer and Information Sciences and Support Services” areas.

Looking at the second group, another 15,047 baccalaureate degrees were awarded in the state of Louisiana meaning over 18,000 baccalaureate degrees total were awarded in one year. While we are by no means saying all of these students would be
interested in a PBC in Business Analytics, we are saying a substantial pool of students exist for the support of this program. One of the keys for the success of the program will be to reach out to these graduates across the state and let them know about the program (where appropriate).

Finally, over 2,000,000 people are employed in the state of Louisiana according to the June 2, 2015 new release from the Louisiana Workforce Commission. Again, that number is only in the state of Louisiana despite the proposed certificate being an online degree program. As with the number of graduates, we are by no means saying all of these employees would be interested in a PBC in Business Analytics. However, with almost 400 good-paying positions being open as of one day in June, a substantial number may be interested in enhancing their education and getting one of those positions. As with the graduates, one of the keys to success for the program will be to reach out to these graduates across the state and let them know about the program.

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<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<td>30 Year one students</td>
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<tr>
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<td>10 Year two students</td>
<td>20 Year 2 students</td>
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<td>12</td>
<td>21</td>
<td>21</td>
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</tr>
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</table>

Intensive targeted marketing will be directed to business and industry. Recruiting efforts will be widespread and personalized to attract a large pool of applicants.

4. Accreditation
Describe plan for achieving program accreditation.

There is no accreditation body for this type of certificate program.

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 instructional needs for this certificate program are met within the existing resources at Northwestern State University. All the courses required to attain the certificate are currently being taught. There are no additional faculty, facilities, equipment, and library resources required. The School of Business will deliver and oversee the Post-Bachelor Certificate in Business Analytics (521301).

The table below provides a summary of the credentials of some of the faculty who may teach courses in the proposed program.

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<tr>
<th>Name</th>
<th>Areas of Specialized Competence Related to the Program</th>
<th>Relevant Publications (as well as direction of theses and dissertations)</th>
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<tbody>
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**Journals Papers**


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<tr>
<th>Name</th>
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</tr>
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| Carmella Parker | International Business, Entrepreneurship, Strategic Management, Industry Clusters and Strategy | Perez-Mira, Dr. B., Hanson, Dr. B. Kilcoyne, Dr. M. Hanson, Dr. T. Wright, S., Champion, S., Parker, Dr. C. (Accepted November 19, 2014). Is it really worth the trouble? – Students perceptions of UDL Guidelines. Association of Business Information Systems. Federation of Business Disciplines (To be published March 2015.)  
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| Mark Swanson | Economic and Finance |

**Journals Papers**


**Selected Conference Presentation:**


**Certifications**

1. Insurance License for Life/Health and Property/Casualty

2. Chartered Financial Analyst

|-------------------|-----------------------------------------------------------------|

**REFEREED PUBLICATIONS**


- **Prj - Kilcoyne, M., Hanson, B., Hanson, T., Perez-Mira, B., & Champion, S.** (2012,


AWARDS
• 2013 – MKTG3230: Principles of Marketing. Exemplary QM Online Course. Fall 2013. NSU ECE.

• 2011 Association for Business Information Systems – Distinguished Paper Award

• 2011 Faculty Excellence in Academic Advising Award


• 2008 Louisiana Online Instructor of the Year

• 2003 Educational Testing Service Recognition of Excellence

PROFESSIONAL DEVELOPMENT
• QM Master Reviewer Certification. November 2014

• Debut. ECE Northwestern State University of Louisiana. January 2014

• Copyright in the Online Environment. ECE Northwestern State University of Louisiana. January 2013

• EdTech Leaders Online Program’s Technology, Teaching and Universal Design. February 15th to April 3rd 2012. Education Development Center’s Center for Online Professional Education.

• QM Rubric Update. February 2012. Quality Matters Program


• Teaching and Learning through Innovation and Excellence 2011-2012. ECE Northwestern State University of Louisiana.

<table>
<thead>
<tr>
<th>Brenda Hanson</th>
<th>Statistics and Management</th>
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**Referred Publications/Proceedings**

**Publications:**


**Hanson, B.**, Kilcoyne, M., McDonald, J.,


**Grants/Professorships**

Capitol One Bank Endowed Professorship, 2013-2014
Business Leaders Endowed Professorship, 2012-2013
Business Leaders Endowed Professorship, 2011-2012
Hooper/Curry Endowed Professorship in Business, 2009-2011

<table>
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<tr>
<th>Curtis Penrod</th>
<th>Database Systems, SPSS; Microsoft Office, including Access, Excel, PowerPoint, and Word; Experience with Student Information System (SIS); Banner; SQL; SQL Developer; Other Programming Languages</th>
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<td>➢ Referred Proceeding and Presentation: Team Member of Research Abstract Submitted to Southwest Decision Sciences Institute: “Move Out Email!!! Here comes Social Media!” – Utilizing Social Media as an alternate communication channel for the higher education classroom. Wright, S., Perez-Mira, B., Penrod, C., Hanson, T. &amp; Horton, E.</td>
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<td>➢ Grant Submitted in Fall 2014 to Louisiana Board of Regents Undergraduate Enhancement Fund: A Virtual Desktop for the Virtual Student. Amount Requested: $93,520</td>
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<tr>
<th>Sarah Wright</th>
<th>Computer Information Systems, Database Systems, Mobile Applications, JAVA</th>
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|              | **Publications**(* indicates refereed publication)**

“Examining Students’ Perceptions About the Educational Use of Technology” Submitted for consideration for publication in the Journal of Research in Business Information Systems Spring 2015 edition. (Submitted Fall 2014)

*Perez-Mira, B., Hanson, B., Kilcoyne, M., Hanson, T., Champion, S., Wright, S., & Williams, J. (2014, Fall) Universal design for


**Grants:**

Louisiana Board of Regents-October 2013 – Co-PI.
“Mobile Applications Lab” – fully funded ($16,672.96)

Louisiana Board of Regents-October 2013 – Co-PI.
“Networking Lab” – fully funded ($14,561)

**Awards:**

2014 Association for Business Information Systems – Distinguished Paper Award
2014-2015 Kenneth I. Durr Endowed Professorship

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**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).

Minimal costs exist for the implementation of this program. All of these courses exist already. The only additional cost would be to cover the cost of an existing faculty member teaching BUAD3120 or MGT 3500 in the summer as those courses are currently not offered during the summer, but would need to be to work with the proposed course schedule. This cost would be minimal to the institution ($5,000 to $10,000 at most) each summer. The cost of this one additional course offering should be covered by the increase in revenue in the other courses during the academic year as well as the fact that other non-PBC students may also enroll in this additional summer course offering. No additional appropriations are requested.

**CERTIFICATIONS**

Primary/Lead Administrator for Proposed Certificate

Provost/Chief Academic Officer

Management Board/System Office
# SUMMARY OF ESTIMATED ADDITIONAL COSTS/INCOME FOR PROPOSED CERTIFICATE

Institution: Northwestern State University  
Date: 8/10/2015  
Certificate Program, Unit: PBC in Business Analytics (521301)

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

## EXPENDITURES

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## REVENUES

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Item E.10. Northwestern State University’s request for approval of a Proposal for a Post Graduate Certificate in Family Nurse Practitioner.

EXECUTIVE SUMMARY

Northwestern State University requests approval to offer a Post Graduate Certificate in Family Nurse Practitioner. The purpose of the program is to provide the didactic and clinical education necessary to registered nurses (RNs) who possess a graduate degree in nursing, in any concentration other than family nurse practitioner to become family nurse practitioners (FNPs).

Nurse practitioners are advanced practice registered nurses formally educated at the master’s level, or higher, to practice the specific populations for which they were prepared. To practice as a family nurse practitioner in Louisiana, nurses must obtain a minimum of a master of science in nursing degree with a concentration of family nurse practitioner. The objectives of this certificate program are to prepare the student to apply advanced practice skills, abilities, and knowledge to provide holistic family-centered primary healthcare, provide culturally competent, population-based primary care for minor acute and chronic conditions for the family unit, and to demonstrate knowledge, skills, and abilities to sit for an FNP Certification Examination.

The structure of the proposed certificate program will follow Northwestern’s Master of Science in Nursing Family Nurse Practitioner program. The certificate program consists of nonclinical courses that are offered online and clinical courses. Post graduate FNP certificate students will be required to complete a minimum of 500 supervised direct patient care clinical hours in the population focused area of practice. The University projects an enrollment of 5 students during the initial year of implementation and 10 students by year five. As well, it is projected that there will be 5 graduates in the second year and 10 by the fifth year.

Existing faculty will teach the courses for the proposed program. No additional facilities, equipment, or library resources will be required. Thus, there will be no need for additional appropriations.

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 Proposal for a Post Graduate Certificate in Family Nurse Practitioner.
August 11, 2015

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

Re: Proposal to Develop a New Academic Certificate Program:
Post-Graduate Certificate in Family Nurse Practitioner

Dear Dr. Woodley:

Northwestern State University is requesting this item be placed on the agenda for approval at the August 2015 Board Meeting:

Northwestern is seeking approval of the Proposal to Develop a New Academic Certificate Program: Post-Graduate Certificate in Family Nurse Practitioner.

Thank you for your consideration of this request.

Sincerely,

[Signature]
James B. Henderson
President

JBH/pc
Attachment
PROPOSAL to DEVELOP a NEW ACADEMIC CERTIFICATE PROGRAM
(CAS, PAC, PBC, GC, PMC, PPC)

Date: 8/10/2015

<table>
<thead>
<tr>
<th>Campus: Northwestern State University (NSU)</th>
<th>Program: Post Graduate Family Nurse Practitioner (FNP) Certificate Program (513818)</th>
</tr>
</thead>
</table>

Institutional Contact Person & Access Info (if clarification is needed): Dr. Connie Roppolo, Director of Graduate Studies and Research in Nursing, Associate Professor, College of Nursing
318-677-3100; roppoloc@nsula.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.

Nurse practitioners are advanced practice registered nurses formally educated at the master’s level, or higher, to practice with the specific populations for which they were prepared. To practice as a family nurse practitioner in Louisiana, nurses must obtain a minimum of a master of science in nursing (MSN) degree with a concentration of family nurse practitioner. The curriculum necessary to obtain this degree requires specific courses that focus on the care of families and individuals of all ages. Some nurses obtain graduate nursing degrees with concentrations in different areas, such as education, research, or other population focused advanced practice roles such as women’s health, pediatrics, etc. The purpose of this program is to provide the didactic and clinical education necessary to registered nurses (RNs) who possess a graduate degree in nursing, in any concentration other than family nurse practitioner to become family nurse practitioners (FNPs). The objectives of this certificate program are to prepare the certificate holder to 1) apply advanced practice skills, abilities and knowledge to provide holistic family centered primary health care to populations across the lifespan in a variety of ambulatory care settings as an advanced practice nurse specializing in family nursing, 2) provide culturally competent, population-based primary care for minor acute and chronic conditions for the family unit, and 3) demonstrate knowledge, skills, and abilities to sit for an FNP Certification Examination in order to apply for a state licensure as an APRN, practicing as a board certified FNP with the ability to attain prescriptive authority.

Once these students successfully complete the Post Graduate Family Nurse Practitioner Certificate Program, documentation of the nurse practitioner role and population focus will be noted on the formal transcript, which allows the graduate to apply for the American Nurses Credentialing Center (ANCC) family nurse practitioner certification exam, the American Academy of Nurse Practitioners’ (AANP) family nurse practitioner certification exam, and for any other examinations deemed appropriate by certifying bodies. Once the graduate passes a national family nurse practitioner certification exam, he/she may apply for advanced practice registered nurse license with the Louisiana State Board of Nursing, and if granted, work in this state as a family nurse practitioner.

The structure of this certificate program follows NSU’s Master of Science in Nursing Family Nurse Practitioner program. Currently, NSU’s MSN nurse practitioner program is nationally accredited by the Commission on Collegiate Nursing Education (CCNE), to assure educational quality and integrity of the program until 2023. It should be noted that NSU has been offering post graduate FNP certificates for over fifteen years. However, when NSU first began offering the post masters certificate program it was not recommended by the Louisiana Systems Board or the Board of Regents that post graduate certificate programs be considered separate programs, as they are not programs that grant a degree. Additionally, it was not until 2015 that CCNE began developing an accreditation review process for all post graduate certificate programs that will eventually be required for all post graduate certificate programs.

The Post Graduate Family Nurse Practitioner Certificate Program follows the MSN FNP curriculum, which is congruent with national standards for graduate level and advanced practice registered nursing education and is consistent with nationally recognized core role and population specific, family nurse practitioner competencies. The curriculum plan for each post graduate FNP certificate student is based on the MSN FNP curriculum pattern, but will vary depending upon course work already completed during the student’s prior graduate program. Each student’s formal graduate transcript is reviewed, and a gap analysis completed to compare previous course work and clinical experiences to the requirements of the MSN FNP curriculum pattern. The gap analysis is a tool that determines the needed coursework for the post graduate FNP certificate student. Courses required for the FNP area of practice are listed in one column, then courses from the student’s graduate transcript that satisfy those required courses are listed. The coursework needing to be completed can then be easily extracted, and an individualized curriculum plan made for the post graduate FNP certificate student. Courses on the MSN FNP curriculum pattern may be waived if the required course or its equivalent has already been completed. Depending on the course and clinical requirements, the post graduate FNP certificate can be obtained in two to five semesters. Additionally, the gap analysis takes into consideration the type and number of clinical experiences the post graduate students has completed, if any, and determines the clinical experiences needed to satisfy the FNP clinical requirements. Post graduate FNP certificate students are required to complete a minimum of 500 supervised direct patient care clinical hours in the population focused area of practice.

The MSN FNP curriculum pattern, also used for the post graduate FNP student, consists of both nonclinical and clinical courses.
Students who pursue the family nurse practitioner concentration take MSN core courses (research, theory, advanced pathophysiology, and social forces), four clinical courses, a clinical practicum, three nurse practitioner role courses, two clinical skills courses, advanced assessment course, advanced pharmacotherapeutics, and family dynamics. The specific courses each post graduate FNP certificate student requires will vary according to that individual's gap analysis, as explained above, so it is possible for the post graduate FNP certificate student to take any of the courses on the MSN FNP Curriculum.

The courses that comprise the MSN FNP program are listed below. In order to provide maximum flexibility to our graduate students, these courses are online, with minimal required visits to campus for the clinical courses.

NURG5120: THEORY ORIENTED NURSING PRACTICE. (3-3-0). Nursing theory development as basis for nursing practice. Systematic description, prediction and control of clinical phenomena in the generation of testable hypotheses about nursing.

NURG5280: ADVANCED HUMAN PHYSIOLOGY AND PATHOLOGY FOR ADVANCED PRACTICE NURSES. (3-3-0). The analysis, evaluation, synthesizing and integration of advanced human physiology and pathology concepts for the advanced practice nurse.

NURG5100: SOCIAL FORCES AND NURSING PRACTICE. (3-3-0). Social forces affecting the health care system; exploration and evaluation of concerns germane to contemporary nursing and the role of the masters prepared nurse. Prerequisite: Graduate standing.

NURG5010: RESEARCH IN NURSING. (3-3-0). Scientific investigation; classifications of research; analysis and interpretation. Developing a research design to investigate a nursing problem. Application of an Evidence-Based Practice model for research appraisal. Prerequisites: Basic statistics course (may be taken concurrently) and graduate standing.

NURG5995: RESEARCH SEMINAR I. (1-1-0). The utilization of evidence based knowledge to provide high quality health care, initiate change, and improve nursing practice. Prerequisite: 5010.

NURG5996: RESEARCH SEMINAR II. (2-2-0). The utilization of evidence based knowledge to develop a professional paper in lieu of thesis relative to the role of the masters prepared registered nurse. Closed registration. By selection only. Prerequisites: NURG 5010 and NURG 5995.

NURG5710: PHARMACOTHERAPEUTICS. (3-3-0). Study of clinical pharmacological therapeutics for advanced nursing practice. Prerequisite: Graduate standing.

NURG5810: FAMILY DYNAMICS FOR ADVANCE NURSING PRACTICE. (3-3-0). Examination of theories of family and the dynamics influencing family life, role behavior, coping, change and challenge. Emphasis is on strategies to assess and promote primary family health to formulate a nursing practice framework. Prerequisite: Registration in or credit for 5120.

NURG5820: INTRODUCTION TO THE ROLE OF THE NURSEPRACTITIONER. (2-2-0). The social, professional, and legal forces which structure and affect the implementation of the role and role competencies of the nurse practitioner. Prerequisite: Acceptance into a nurse practitioner concentration.

NURG5830: ROLE OF THE NURSE PRACTITIONER IN CLINICAL PRACTICE. (1-1-0). Analysis of the professional role of the nurse practitioner in clinical practice; focus is on the theoretical practice framework, therapeutic nurse-client relationship, clinical decision making process, management processes, methods of communicating client status, case management, practice protocols and guidelines and management concepts related to the client's wellness/illness state. Prerequisite: 5820. Corequisites: 5330 or 5650 or 5780 or 5850 or 5410

NURG5840: ROLE OF THE NURSE PRACTITIONER IN BUSINESS PRACTICE. (1-1-0). Practical applications and strategies for marketing self as an advanced practitioner of nursing, developing professional, entrepreneurial, political and legal acuity. Analyze health care policy to determine current and future directions of self as a nurse practitioner provider. Prerequisite 5830. Corequisite: 5330 or 5670 or 5790 or 5870.

NURG5260: CLINICAL SKILLS I FOR THE NURSE PRACTITIONER IN CLINICAL PRACTICE. (1-0-3). Practical applications and strategies for learning beginning skills of diagnostic testing and performing technical skills relative to advanced practice. Prerequisite: 5700, 5280; Corequisite: 5850 or 5330 or 5410 or 5780 or 5610.

NURG5270: CLINICAL SKILLS II FOR THE NURSE PRACTITIONER IN CLINICAL PRACTICE. (1-0-3). Practical applications and strategies for learning advanced skills of diagnostic testing and performing technical skills relative to advanced practice. Prerequisites: 5260 and 5780 or 5420 or 5850 or 5340 or 5650. Corequisites: 5770 or 5430 or 5860 or 5350 or 5670.

NURG5700: METHODS OF CLINICAL NURSING ASSESSMENT. (3-2-6). Advanced health assessment of infants, children, adults, prenatal and elderly with emphasis on data collection, differential diagnosis, and establishing priorities for health maintenance and prevention. Prerequisite: Graduate standing and registration in or credit for 5280. Must be accepted into nurse practitioner program.
NURG5770: FNP I. CARE OF EXPECTANT FAMILIES, CHILDREN AND ADOLESCENTS. (3-2-7). Management of expectant parents and common acute, chronic and rehabilitative primary health problems of neonates through adolescence. Prerequisites: 5700, 5280, 5820, and 5120. Corequisite: 5830. Closed registration; by selection only.

NURG5780: FNP II. CARE OF THE ADULT CLIENT. (3-2-7). Management of health and common acute, chronic and rehabilitative primary health problems of young adults to senescence. Prerequisites: 5770, 5710.


NURG5800: FNP IV. CLINICAL PRECEPTORSHIP. (3-0-21). Clinical preceptorship in selected clinical sites with opportunities to refine the role of the family nurse practitioner and develop competency in clinical judgment. Prerequisites: 5840, 5790.

Students are required to be continuously enrolled in 5800 until all clinical hours are completed and approved.

This program is an institutional priority at this time for two reasons: 1) The post graduate FNP certificate program has been taught for several years at NSU, successfully preparing FNP who provide primary care throughout Louisiana. Due to the recommendation by national certifying bodies that post graduate nurse practitioner certificate programs become accredited separately from degree programs, NSU is at risk of losing the ability to offer this certificate. NSU had 5 students apply for post graduate nurse practitioner certificate program entry in January of 2015, and has 5 students applying for post graduate nurse practitioner certificate program entry for the upcoming year; 2) The increasing demands for primary care providers demonstrates the need for family nurse practitioners. Registered nurses who have graduate degrees in nursing, with concentrations in areas other than FNP, may be unable to fill this need, and if working in primary care already, are not able to serve the broad range of patients (families and individuals of all ages) that FNP are able to serve. The ability to treat patients of all ages is beneficial in filling the need for primary care, particularly in primary care Health Professional Shortage Areas.

The post graduate FNP certificate program is congruent with and furthers NSU's mission. NSU is a responsive, student oriented institution that is committed to the creation, dissemination, and acquisition of knowledge through teaching, research, and service. The University maintains as its highest priority excellence in teaching in graduate and undergraduate programs. NSU will prepare its students to become productive members of society and will promote economic development and improvements in the quality of life of the citizens in its region. The post graduate FNP certificate program will further this mission by educating graduate students to become family nurse practitioners. These FNP will help meet the increased demands for primary care in Louisiana, and potentially in the national arena. Keeping the citizens of Louisiana healthy potentiates their productivity, which is important to economic development and potential growth.

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.

Healthcare is a constantly evolving field, and the demand for primary care across the United States is projected to rise significantly over the next five years. Population growth, aging of the baby boomers, and the expansion of health insurance by the Affordable Care Act of 2010 (ACA) are some factors contributing to this demand. In contrast to the increased demand for primary care, current forecasts project a shortage of 20,400 primary care physicians by the year 2020 (Health Resources and Service Administration, National Center for Health Workforce, U.S. Department for Health and Humans Services, 2013). This gap in primary care will affect many Americans, but those living in Primary Care Health Professional Shortage Areas (HPSAs) are likely to be most affected. Overall, 18.7% of the U.S. population lives in HPSAs; in Louisiana, more than 30% of the population lives in HPSAs (Health Resources and Services Administration, U.S. Department of Health & Human Services, 2014). Health Resources and Services Administration (HRSA) determined in 2010, that 1,464,387 Louisianans were primary care underserved, and 232 primary care nurse practitioners were needed to remove that designation. These projections make Louisiana citizens especially vulnerable to lack of primary care in the next several years. The Louisiana Commission on Medical Education maintained that 40% of Louisiana graduate medical education individuals (physicians) opt to complete a residency program and seek job opportunities in other states (Louisiana Department of Health and Hospitals, 2011). Additionally, fewer physicians are electing primary care as their specialty due to poor reimbursement and overall lower compensation. According to Buerhaus et al. (2014), primary care nurse practitioners are more likely than physicians to practice in rural areas, serving a large proportion of uninsured and vulnerable populations. Additionally, research indicates primary care outcomes are comparable between patients treated by nurse practitioners and patients treated by physicians. Examples include improvement of diseases/conditions, reductions in symptoms, mortality, hospitalization, and overall patient satisfaction (Newhouse, et al., 2011).

With a significant primary physician shortage anticipated, family nurse practitioners (FNPs) are a viable option to help meet...
growing demand for primary care. These primary healthcare providers can practice locally, regionally, or nationally. Additionally, preparing nurse practitioners is less costly and time consuming than preparing physicians. Where it takes 11 or 12 years to prepare a physician, it takes 5 or 6 years to educate a nurse practitioner (National Governor’s Association, 2012). Additionally, a registered nurse with a graduate degree who returns to college to pursue a post graduate FNP certificate can be prepared in 2 to 5 semesters, depending on the nurse’s degree, coursework, and training. This drastically expedites the time required to put the FNP in practice, thereby helping reduce the primary care shortage. This post graduate FNP program will allow NSU to continue providing post graduate registered nurses with the opportunity to pursue a post graduate FNP certificate, and practice in the highly needed field of primary care.

3. Students

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

Student interest/demand for a post graduate FNP certificate will be from registered nurses who hold a graduate degree, but are not advanced practice nurses, or practice with populations other than family. Examples of students who may have an interest in a post graduate FNP certificate include non-licensure graduate degreed nurses (educator, administrator, and research degrees) and advance practice registered nurses licensed as clinical nurse specialists, nurse midwives, certified registered nurse anesthetists, or nurse practitioners licensed to work in population focused areas other than family nurse practitioner.

According to the Louisiana State Board of Nursing (LSBN), 339 RNs obtained a non-licensure graduate degree from Louisiana programs in 2014. This is inclusive of nurse educators and nurse administrators who are not licensed to practice as APRNs. When looking at the number of APRNs in Louisiana that are not FNP, the Louisiana Association of Nurse Practitioner’s (LANP) Fact sheet, 2014, note there are 288 Adult, 125 Pediatric, and 107 Women’s Healthcare nurse practitioners. If these nurses ever desire to practice as a family nurse practitioner, the post graduate FNP certificate program would allow them to receive credit for graduate courses already completed, if deemed equivalent to the required MSN FNP program courses by gap analysis, providing them the potential to practice in 2 to 5 semesters, depending on prior graduate education.

NSU enrolls a large number of nurse practitioner students every year, and our numbers continue to grow. NSU had 190 NP students in 2013; 233 NP students in 2014, and 240 NP students in 2015. NSU graduated 54 nurse practitioners in 2013, 46 nurse practitioners in 2014, and 66 nurse practitioners in 2015. Projections for 2016 are 71 nurse practitioner graduates. There are 105 applicants requesting admission to the next cohort of nurse practitioner programs, and NSU projects graduating all students we accept. The table below outlines the nurse practitioner graduates from NSU since 2013, and discriminates the FNP graduates from other types of nurse practitioner graduates. The numbers of NSU graduates listed in the table below as “NPs other than FNP” are potential candidates for the post graduate FNP certificate.

| NSU APRN Graduates from 2013 to 2015, with Projections for 2016 and 2017 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 | 2013 | 2014 | 2015 | 2016 | 2017 |
| All NPs         | 54   | 46   | 66   | **71** | **85** |
| FNP only        | 47   | 25   | 40   | **45** | **60** |
| NPs other than FNP | 7   | 21   | 26   | **26** | **25** |

**Projected Graduates

Based on NSU’s previous experience with post graduate nurse practitioner certificates, we anticipate enrolling 5 students per year for the first and second year, and enrolling 10 students per year thereafter. See the table below.

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*currently in the fifteenth year of offering a post graduate FNP certificate

4. Accreditation

Describe plan for achieving program accreditation.

The post graduate FNP certificate program has been taught for several years at NSU, successfully preparing FNPWs who provide primary care throughout Louisiana. It has recently been recommended by national certifying bodies that post graduate nurse practitioner certificate programs become accredited separately from degree programs. NSU’s MSN program is nationally accredited by the Commission on Collegiate Nursing Education (CCNE), to assure educational quality and integrity of the program until 2023. NSU will apply to have this post graduate FNP certificate program accredited by CCNE once approved. When NSU first began offering the post masters certificate program it was not recommended by the Louisiana Systems Board or the Board of Regents that post graduate certificate programs be considered separate programs, as they are not programs that grant a degree. Additionally, it was not until 2015 that CCNE began developing an accreditation review process for all post graduate certificate
programs that will eventually be required for all post graduate certificate programs.

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 instructional needs for this certificate program are met within the existing resources at Northwestern State University, and all courses required to attain the certificate are currently being taught. There are no additional faculty, facilities, equipment, and library resources required. No additional appropriations are requested. The College of Nursing will oversee this proposed certificate program.

6. Cost

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

There are no added costs with the implementation of this program. As stated earlier, NSU already offers this post graduate FNP certificate, but is formally requesting approval through the Board of Regents because of the recommendation that certificate programs be accredited separately from degree programs in the future.

CERTIFICATIONS

Primary Administrator for Proposed Certificate

Provost/Chief Academic Officer

Management Board/System Office

Date

Date
Item E.11. Northwestern State University’s request for approval of a Letter of Intent to offer an Associate of Applied Science Degree in Engineering Technology.

EXECUTIVE SUMMARY

Northwestern State University requests approval of a Letter of Intent to offer an Associate of Applied Science (AAS) degree program in Engineering Technology. The proposed program focuses on problem-solving technology. The program will allow students to gain pertinent knowledge and skills to work as technicians in manufacturing organizations.

The 60-61 credit hour degree program will be offered in a traditional classroom setting. The proposed AAS will fulfill growing workforce needs as Louisiana has attracted many industrial, technical, and manufacturing companies over the past five years. Courses will come from the Department of Engineering Technology. Students will be able to choose an electronics concentration or an industrial concentration.

This program aligns with the University’s role, scope, and mission in that Northwestern has long been committed to education and economic development in the region. For several years, the Department of Engineering Technology has been working with various manufacturing industries in northwest and central Louisiana. The Department also has close ties with the Manufacturing Managers Association of Central Louisiana. This organization and Northwestern’s alumni working in manufacturing facilities have indicated the need for an Associate of Applied Science Degree in Engineering Technology. The proposed program can produce manpower with the technical background to operate Louisiana’s manufacturing industries.

In 2014, the Central Louisiana Manufacturing Managers’ Council passed a resolution whereby Northwestern was asked to offer an associate degree in order to better meet workforce needs. The University worked closely with Central Louisiana Technical and Community College to provide this degree; however, to sustain operations in the region, many additional workers who have appropriate skills are needed. Hence, Northwestern seeks to offer the degree in a temporary manner until sufficient numbers of employees needed for the region are educated. The Louisiana Workforce Commission (LWC) projects major growth in the Northwest Region in the following industries: Oil and Gas, Chemicals, Lumber, and others, all of which will demand workers with skills covered in the degree. Over the last few years, the University has repeatedly heard from manufacturing entities that they need skilled workers with excellent problem-solving skills.
Students who will be attracted to this program come from high schools, technical colleges, and manufacturing and technology entities from across the state and region. Enrollment is estimated to commence with 15 students and grow to 60 students by year five. As well, it is projected that there will be 15 graduates in the second year and approximately 70 by the fifth year. The first few years of the program are expected to have low enrollment while the program grows and gains recognition. It is expected that it will take some time to recruit students to the program. Therefore, an initial enrollment of 15 students is a realistic goal.

Because the courses for this program are currently offered, little additional expense will be required. If additional concentrations are developed, new faculty may be necessary, but at present, there is no expectation that additional faculty will be needed for program implementation. However, based on projected enrollments, it may be necessary to add an adjunct faculty member by year 3 or 4. Program costs will be somewhat offset by anticipated revenues.

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 Letter of Intent to offer an Associate of Applied Science degree program in Engineering Technology.
July 9, 2015

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

Re: Letter of Intent: Associate of Applied Science in Engineering Technology (ASET)

Dear Dr. Woodley:

Northwestern State University is requesting this item be placed on the agenda for approval at the August 2015 Board Meeting:

Northwestern is seeking approval of the Letter of Intent to offer an Associate of Applied Science Degree in Engineering Technology (ASET).

Thank you for your consideration of this request.

Sincerely,

James B. Henderson
President

JBH/pc
Attachment
LETTER OF INTENT to DEVELOP a NEW ACADEMIC PROGRAM (Sept 2011)

General Information

<table>
<thead>
<tr>
<th>Campus: Northwestern State University</th>
<th>Program: Title, CIP, Degree/Certificate Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Associate of Applied Science Degree in Technology, 15.0000</td>
</tr>
</tbody>
</table>

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

Dr. Lisa Abney, Provost and VPASA,
Caspari Hall
310 Sam Sibley Drive, Suite 211
Natchitoches, LA 71497
Voice: 318.357.5361
Fax: 318.357.4517
abney@nsula.edu

Date:

1. Program Objectives and Content

Describe the program concept: purpose and objectives; basic structure and components/concentrations; etc.

The Associate of Applied Science degree in Engineering Technology (ASET) focuses on problem solving in technology. The program will allow students to gain pertinent knowledge and skills to work as technicians in manufacturing organizations.

This program, which will be delivered face to face, will fulfill growing workforce needs as Louisiana attracted many industrial, technical, and manufacturing companies over the past five years. Courses will come from the Department of Engineering Technology. Students will enroll in the following courses; all of which are currently taught courses at Northwestern State University. This program will have two concentrations: 1) Associate of Applied Science Degree in Engineering Technology- Electronics Concentration, and 2) Associate of Applied Science Degree in Engineering Technology- Industrial Concentration.

Associate of Science Degree in Engineering Technology- Electronics Concentration (61 credit hours)

- Electrical Principles I (3 credit hours)
- Electrical Principles I Laboratory (1 credit hour)
- Electronic Fabrication Laboratory (1 credit hour)
- Electrical Principles II (3 credit hours)
- Electrical Principles II Laboratory (1 credit hour)
- Digital Electronics I (3 credit hours)
- Digital Electronics I Laboratory (1 credit hour)
- Basic Electronics (3 credit hours)
- Basic Electronics Laboratory (1 credit hour)
- Advanced Electronics (3 credit hours)
- Advanced Electronics Laboratory (1 credit hour)
- Instrumentation and Control (3 credit hours)
- Instrumentation and Control Laboratory (1 credit hour)
- Introduction to Engineering Technology (1 credit hour)
- Technical Drafting I (3 credit hours)
- Composition and Rhetoric I (3 credit hours)
- Composition and Rhetoric II (3 credit hours)
- College Algebra (3 credit hours)
- Trigonometry (3 credit hours)
- Calculus for Engineering Technology (6 credit hours)
- The University Experience (1 credit hour)
- General Chemistry (3 credit hours)
- Exploring the Arts (3 credit hours)
- General Physics (3 credit hours)
- General Physics Laboratory (1 credit hour)
- Social/Behavioral Science (3 credit hours)

**Associate of Science Degree in Engineering Technology- Electronics Concentration (60 credit hours)**

- Introduction to Engineering Technology (1 credit hour)
- Technical Drafting I (3 credit hours)
- Technical Drafting II (3 credit hours)
- Engineering Tools and Dimensional Analysis (3 credit hours)
- Occupational Safety and Health (3 credit hours)
- Metals Machining I (3 credit hours)
- Engineering Materials (3 credit hours)
- Electrical Principles I (3 credit hours)
- Electrical Principles I Laboratory (1 credit hour)
- Electronic Fabrication Laboratory (1 credit hour)
- Electrical Principles II (3 credit hours)
- Electrical Principles II Laboratory (1 credit hour)
- Composition and Rhetoric I (3 credit hours)
- Composition and Rhetoric II (3 credit hours)
- College Algebra (3 credit hours)
- Trigonometry (3 credit hours)
- Calculus for Engineering Technology (6 credit hours)
- The University Experience (1 credit hour)
- General Chemistry (3 credit hours)
- Exploring the Arts (3 credit hours)
- General Physics (3 credit hours)
- General Physics Laboratory (1 credit hour)
- Social/Behavioral Science (3 credit hours)

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, etc.

This program aligns with the University’s role, scope, and mission in that Northwestern has long been committed to education and economic development in the region. For several years, the Department of Engineering Technology at Northwestern State University of Louisiana (NSU) has been working with various manufacturing industries in northwest and central Louisiana. The Department also has close ties with the Manufacturing Managers Association of Central Louisiana. This Organization and our alumni working in manufacturing facilities have indicated the need for an Associate of Applied Science Degree in Engineering Technology. This degree program can produce manpower with the technical background to operate Louisiana’s manufacturing industries. In 2014, the Central Louisiana Manufacturing Managers’ Council passed a resolution whereby Northwestern was asked to offer an Associate’s degree in order to better meet workforce need. The University worked closely with Central Louisiana
Technical and Community College to provide this degree; however, to sustain operations in the region, many more workers are needed who have appropriate skills, and hence, Northwestern seeks to offer the degree in a temporary manner until CLTCC undergoes its transition to a comprehensive Community College and pursues SACSCOC approval. At the point in time in which CLTCC is able to offer the degree, Northwestern will no longer offer it.

A survey conducted by the Central Louisiana Chamber of Commerce, employers responding to the survey identified the following “hard” and “soft” skills needed in the current and future workforce:

- computer skills
- safety
- engineering
- math & measurements
- interpersonal skills / communications
- industrial machine operations

The Louisiana Workforce Commission (LWC) projects major growth in the Northwest Region in the following industries: Oil and Gas, Chemicals, Lumber, and others, all of which will demand workers with skills covered in the associate degree. Table 1 presents project LWC projected growth areas.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Growth 2010-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary metal manufacturing</td>
<td>177.8%</td>
</tr>
<tr>
<td>Transportation equipment manufacturing</td>
<td>68.8%</td>
</tr>
<tr>
<td>Pipeline transportation</td>
<td>50.0%</td>
</tr>
<tr>
<td>Merchant wholesalers, nondurable goods</td>
<td>32.7%</td>
</tr>
<tr>
<td>Building material and garden supply stores</td>
<td>32.6%</td>
</tr>
<tr>
<td>Furniture and related product manufacturing</td>
<td>29.5%</td>
</tr>
<tr>
<td>Professional and technical services</td>
<td>26.0%</td>
</tr>
<tr>
<td>Administrative and support services</td>
<td>25.6%</td>
</tr>
<tr>
<td>Merchant wholesalers, durable goods</td>
<td>24.2%</td>
</tr>
<tr>
<td>Waste management and remediation service</td>
<td>20.9%</td>
</tr>
<tr>
<td>Management of companies and enterprises</td>
<td>20.1%</td>
</tr>
<tr>
<td>ISPs, search portals, and data processing</td>
<td>20.0%</td>
</tr>
<tr>
<td>Mining, except oil and gas</td>
<td>19.2%</td>
</tr>
</tbody>
</table>
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 of the state’s adult population or foster innovation through research.

This program is a priority for the Institution because it further assists the University in fulfillment of its mission and it increases educational attainment of the state’s adult population. Northwestern’s mission statement directly focuses upon the preparation of its students to become productive members of society and promotes economic development and improvements in the quality of life of the citizens in its region.

Since 1884, Northwestern State University has been committed to serving the needs of the region through economic development and partnerships. Partnerships with business and industry have increased dramatically over the last five years, and at present, Northwestern State University has partnered with local/regional, and national businesses and industry leaders from a vast array of disciplines ranging from accounting firms to industrial plants to retail and restaurant businesses. Over the last few years, the University has heard repeatedly from manufacturing entities that they need skilled workers with excellent problem solving skills.

4. Students

Summarize student interest/demand for the proposed program.

Students who will be attracted to this program come from high schools, technical colleges, and manufacturing and technology entities from across the state and region. Anticipated enrollment appears below.

The first few years of the program are expected to have low enrollment while the program grows and gains recognition. It is expected that it will take some time to recruit students to the program. Therefore, an initial enrollment of 15 students is a realistic goal.

After there has been adequate advertisement and recruiting efforts for the program, it is expected that there will be an increased interest and therefore increased enrollment. Therefore, it is realistic to expect that by year five, an enrollment of 70 to 75 students is obtainable. Table 2 demonstrates the expected enrollment and graduation rate for the first five years of the program.

<table>
<thead>
<tr>
<th>Table 2: Estimated Enrollment/Graduation Rate for First Five Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>New Enrollments</td>
</tr>
<tr>
<td>Continuing Enrollments</td>
</tr>
<tr>
<td>Graduated</td>
</tr>
</tbody>
</table>

Intensive targeted marketing will be directed to high schools and technical colleges. Recruiting efforts will be widespread and personalized to attract a large pool of applicants.
5. Cost

Estimate costs for 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.

Because the courses for this program are currently offered, little additional expense will be required. If additional concentrations are developed, new faculty may need to be added, but at present, there is no expectation that additional faculty will be needed to assist with the implementation of this degree. However, based on projected enrollments, it may be necessary to add an adjunct faculty member by year 3 or 4. An adjunct faculty member to teach one course is approximately $2,500/course. It is projected that an adjunct faculty member would be needed for approximately 3 courses/calendar year.

Table 3 outlines the proposed budget for the Associate of Applied Science degree at Northwestern State University. The annual cost of the BAST program is expected to range from $1,500 in the first year to $9,000 in year four. As demonstrated in Table 3, the projected revenue far exceeds the cost of the program.

Table 2: Budget of Additional New Expenses for the Associate of Applied Science degree in Engineering Technology

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjunct Faculty¹</td>
<td>0</td>
<td>0</td>
<td>7,500</td>
<td>7,500</td>
</tr>
<tr>
<td>Program marketing</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$9,000</td>
<td>$9,000</td>
</tr>
</tbody>
</table>

Sources of Revenue

| Tuition/Fees²          | 137,835.00       | 413,511.75       | 781,077.75       | 1,194,589.50     |
| TOTAL                  | 137,835.00       | 413,511.75       | 781,077.75       | 1,194,589.50     |

¹Adjunct faculty based on projected enrollment
²Based on # of projected students x online undergraduate tuition and fees for 12 hours (estimate of average # of hours/semester) x 3 semesters (calendar year). No adjustment for rising tuition and fees.

CERTIFICATION:

[Signature]
Chief Academic Officer

[Signature]
Chancellor/President

[Signature]
Management Board

Date 7/9/15
Date 7/09/15
Item E.12. Northwestern State University’s request for approval of a Letter of Intent to offer a Doctor of Education in Adult Learning and Leadership degree program.

EXECUTIVE SUMMARY

Northwestern State University requests approval of a Letter of Intent for a Doctor of Education in Adult Learning and Leadership degree program. The proposed program offers a doctor of education degree for students who intend to pursue or advance their careers in the professional practice of adult learning, postsecondary education, or healthcare administration and management.

The Doctorate of Education in Adult Learning and Leadership consists of 63 credit hours with a minimum of 9 dissertation hours. It is a comprehensive cohort-based online program. The program will provide foundation courses in adult learning and organizational leadership, along with coursework targeting each of the three concentration areas: community college leadership, health administration and leadership, and workforce development and organizational learning. Within concentration areas, students may pursue specialized areas of interest and study through elective courses. Also, they will have an opportunity to gain practical experience within their own organization or area of interest through an individualized practicum experience.

According to the Louisiana Workforce Commission, Louisiana job growth forecasts are very robust over both the short and long-term with an estimated 103,000 new jobs in 2015 and steady need for 76,000 workers per year through 2022. 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 postsecondary vocational training, all are 5-star rated jobs with an average annual salary of nearly $40,000. While this employment outlook is positive, there is a 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.

The Doctor of Education in Adult Learning and Leadership aligns with the priorities of Northwestern State University and Louisiana’s academic, healthcare, and workforce development goals. As well, the proposed program will be the only advanced degree program in Louisiana that focuses on the needs of developing community college administrators, preparing faculty to work with adult learners and workforce development, and healthcare educators and leaders. 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.
Students for the program will come from various roles and organizations in adult learning and community college and healthcare leadership. Recruiting efforts will employ various marketing strategies to attract high-quality, qualified applicants from the local, state, national, and international levels. It is anticipated that the greatest interest will be from individuals seeking advanced faculty credentials or leadership positions within community colleges or four-year institutions, those seeking leadership or faculty roles in healthcare, or adult learning practitioners seeking advanced credentials to work with adults. Recruitment for the program will be international in scope. The University projects that there will be an enrollment of 20 students each year for the first five years. Completers are estimated at 20 in years 4 and 5.

The proposed program is being built primarily on the faculty and facilities already available at the University. Additional costs to fully implement the program during its first four years are projected to be $170,000, including two additional faculty lines. The University projects that this would be offset by over $484,000 in estimated tuition revenue. The University is committed to providing adequate funding to initiate and maintain the program. In order to maximize resource benefits and meet the funding needs of the program, the College of Education will ensure that faculty and resource allocation and program offerings are designed in the most efficient and cost-effective manner possible.

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 Letter of Intent to offer a Doctor of Education in Adult Learning and Leadership degree program.
July 15, 2015

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

Re: Letter of Intent: Doctor of Education in Adult Learning and Leadership

Dear Dr. Woodley:

Northwestern State University is requesting this item be placed on the agenda for approval at the August 2015 Board Meeting:

Northwestern is seeking approval of the Letter of Intent to offer a Doctor of Education in Adult Learning and Leadership.

Thank you for your consideration of this request.

Sincerely,

James B. Henderson
President

JBH/pc

Attachment
LETTER OF INTENT to DEVELOP a NEW ACADEMIC PROGRAM  [Sept 2011]

General Information

<table>
<thead>
<tr>
<th>Campus: Northwestern State University</th>
<th>Program: Title, Doctor of Education in Adult Learning and Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Contact Person &amp; Access Info (if clarification is needed):</td>
<td></td>
</tr>
<tr>
<td>Dr. Lisa Abney</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:abney@nsula.edu">abney@nsula.edu</a>, 318.357.5361</td>
<td></td>
</tr>
</tbody>
</table>

Date: 7-15-15

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

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, post-secondary education, or healthcare administration and management. Graduates are qualified to assume advanced leadership roles in areas of workforce development, organizational leadership, higher education administration and management, scholarship, health services, and healthcare administration.

The doctor of education is a practitioner degree program that prepares students for the professional practice of adult learning and leadership across the following domains: teaching, learning, organizational change, curriculum and instructional design, program management and planning, community college leadership, and healthcare planning and administration.

Graduates from the doctoral of education program will be expected to:

- Engage in reflective practice for continuous professional growth and improvement
- 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
- Demonstrate leadership and management skills applicable to the administration of adult and lifelong learning programs
- 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 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
• 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

Program Content

The comprehensive, 63 semester hour, cohort-based online program provides foundation courses in adult learning and organizational leadership, along with coursework targeting each of the three concentration areas: community college leadership, health administration and leadership, and workforce development and organizational learning. Within 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.

Foundation - 15 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

Concentration – 18 semester hours

• Concentration in Community College Leadership (CCL)
  • Community College Organization and Administration
  • Organizational Leadership
  • Financial and Human Resource Administration
  • Teaching, Learning, and Curriculum in Post-Secondary Education
  • Grant Development and Project Management (all concentrations)
  • Seminar in Law, Policy, and Issues (all concentrations)

• Concentration in Health Administration and Leadership (HAL)
  • Assessment of Healthcare Programs and Organizational Outcomes
  • Financial and Human Resource Administration
  • Grant Development and Project Management (all concentrations)
  • Organizational Leadership
  • Information Systems Technology
  • Seminar in Law, Policy, and Issues (all concentrations)

• Concentration in Workforce Development and Organizational Learning (WDOL)
  • Workforce Development in a Global Economy
- Seminar in Adult Learning Environments
- Planning and Measuring Transformative Adult Learning Programs
- Teaching Disadvantaged Adult Learners
- Grant Development and Project Management (all concentrations)
- Seminar in Law, Policy, and Issues (all concentrations)

Electives – 9 semester hours
- Related existing NSU Graduate Courses (Other doctoral concentrations, Educational Leadership, Educational Technology, Education Psychology, Curriculum and Instruction, Student Affairs and Higher Education, Nursing and Allied Health, research, statistics, etc.)
- Scholarly Writing and Practice

Application – 3 semester hours (Course content/practicum site will vary with concentration)
- Applied Principles of Adult Learning or Organizational Leadership (internship in leadership area)

Research & Analysis – 9 semester hours
- Methods for Planning and Conducting Research (quantitative and qualitative)
- Data Collection and Analysis for Research (statistical analysis and qualitative)
- Doctoral Seminar: Planning for Practice and Research (developing a topic proposal - will begin connecting with an organization to develop dissertation topic proposal)

Dissertation – 9 semester hours (minimum)

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, etc.

Statewide Needs

Louisiana job growth forecasts are very robust over both the short and long-term with an estimated 103,000 new jobs in 2015 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. 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.

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.

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 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 degreed faculty and administration with the capacity for creating innovative institutional change and developing new learning models and instructional strategies that can address the above 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. The current Master of Arts 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.
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 doctoral program to meet Louisiana’s growing need for those who can lead, teach, and innovate at the highest levels.

Nationally, healthcare management occupations are anticipated to grow 10% from 2012 to 2022. The median annual wage for these management occupations is expected to be $94,000. Additional healthcare administration and leadership professions which the Health Administration Leadership concentration of the Educational Doctorate would support, such as post-secondary health specialty teachers and health teacher are predicted to increase 70% increase from 2012-2022. The median annual wage for these post secondary health specialty teachers is approximately $80,000 (US Department of Labor US Bureau of Labor Statistics, 2012).

Louisiana job growth forecasts align with national trends in anticipated healthcare management growth. The Louisiana Workforce Commission projects over 5,000 new jobs for Post-Secondary Business Teachers, Economics teachers, Health Specialties Teachers (for all healthcare professions except medical doctoral degrees) and Healthcare administrators in all healthcare professions in 2015 and a long-term need of over 6,000 new jobs annually for the same professions, which require a doctoral degree through the year 2022 (Louisiana Workforce Commission, 2015).

Regionally, there is a current and anticipated shortage of Health Specialties Teachers and Administrators that corresponds with the projected shortages of nursing and allied health professionals. At a recent regional advisory council, NSU was specifically asked what plans NSU had to provide doctoral degrees for those employees interested in healthcare administration and leadership. Although NSU began offering the Doctor of Nursing Practitioner (DNP) degree, it was noted that the DNP’s focus is primarily on producing doctorally prepared healthcare experts, who are practice experts. This leaves an unfilled gap in those healthcare workers who wish to become healthcare leaders and administrators OR healthcare educational leaders or administrators. The Ed.D with a concentration in healthcare administration and leadership offered at NSU will provide a method to fill this gap in educational offerings that are specific to workforce needs.

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, preparing faculty to work with adult learners and workforce development, and healthcare educators and leaders. 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.
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 of the state’s adult population or foster innovation through research.

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 Family College of Education 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. Based on input from regional communities and economic development, recent redesign and realignment of this program resulted 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 postsecondary 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 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.”

Additionally, by providing graduates that 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 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.

Much like the concentration of the Doctor of Education degree that focuses on community college leadership, the health administration and leadership degree will support attainment of the Board of Regents goal of increasing the educational attainment of the adult population to the SREB average of 42% by 2025. Further, the Doctor of Education degree concentration that focuses on health administration and leadership will help colleges which offer healthcare education degrees to meet the Southern Association of Colleges and Schools (SACSCOC) requirement to have 25% or more of healthcare education courses taught by faculty members with a terminal degree. This requirement has critical significance for over 21 colleges/schools in Louisiana offering healthcare education.

The Doctor Of Education In Adult Learning and Leadership aligns with the priorities of Northwestern
State University and Louisiana’s academic, healthcare, 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, healthcare, and leadership roles, thereby contributing to the educational attainment of adults, economic development, excellent healthcare, and overall quality of life in Louisiana.

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

Students for this program will come from various roles and organizations in adult learning and community college and healthcare leadership. It is anticipated that the greatest interest will be from individuals seeking advanced faculty credentials or leadership positions within community colleges or four-year institutions, those seeking leadership or faculty roles in healthcare, or adult learning practitioners seeking advanced credentials to work with adults in various industry, educational, or other settings.

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. 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>

Based on an analysis of these surveys and additional inquiries to the healthcare industry, 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>80</td>
</tr>
<tr>
<td>Graduates</td>
<td>20</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Intensive targeted marketing will be directed to individuals in the roles and organizations listed above. Recruiting efforts will employ various marketing strategies to attract high quality, qualified applicants from the local, state, national, and international levels.
5. Cost

Estimate costs for 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.

Currently, the NSU Adult Learning and Development faculty consist of one doctorate-level full time faculty member, two masters-level adjunct faculty and one doctorate-level 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 graduate faculty, one additional doctorate-level faculty member will be required in the first year and a second doctorate-level faculty member in the third year. As this program includes concentrations in Health Administration and Leadership and Community College Leadership, faculty from the existing College of Nursing and Allied Health (CONAH) and College of Education and Human Development (COEHD) Student Affairs in Higher Education 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% of salary. Additionally, summer teaching stipends of $8,600 plus benefits of 25% are included in the budget. 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.

Equipment costs for new faculty members is anticipated at $2,500 per year for years one and three. Ongoing supply costs are estimated at $1,500 annually.

<table>
<thead>
<tr>
<th>Description</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral-Level Faculty ($63,000 + $20,160)</td>
<td>$83,160</td>
<td>$83,160</td>
<td>$166,320</td>
<td>$166,320</td>
<td>$166,320</td>
<td>$665,280</td>
</tr>
<tr>
<td>Summer Teaching Stipend ($8,600 + 2,300)</td>
<td>$10,900</td>
<td>$10,900</td>
<td>$21,800</td>
<td>$21,800</td>
<td>$21,800</td>
<td>$87,200</td>
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<tr>
<td>Equipment</td>
<td>$2,500</td>
<td>$0</td>
<td>$2,500</td>
<td>$0</td>
<td>$0</td>
<td>$5,000</td>
</tr>
<tr>
<td>Supplies</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$7,500</td>
</tr>
<tr>
<td>Total</td>
<td>$98,060</td>
<td>$95,560</td>
<td>$192,120</td>
<td>$189,620</td>
<td>$189,620</td>
<td>$764,980</td>
</tr>
</tbody>
</table>

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

CERTIFICATION:

[Signatures of Chief Academic Officer, Chancellor/President, and Management Board]
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,

Susana Schowen
Director of Workforce Initiatives
LED FastStart
Louisiana Economic Development
225-342-5729

8/06/2015
BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 27, 2015

Item E.13. University of Louisiana at Lafayette’s request for approval to offer an existing program online: the Master’s Degree Program in Educational Leadership.

EXECUTIVE SUMMARY

University of Louisiana at Lafayette requests consideration and approval to offer an online Master’s Degree Program in Educational Leadership. The program is currently being offered through the College of Education, and the courses have recently been converted to follow a “hybrid” online instructional model.

The Master’s in Educational Leadership is a 36-credit-hour program that leads to certification in K-12 supervision. The course requirements address the knowledge, skills, and dispositions established by national and state leadership standards. Topics addressed include but are not limited to school vision, school improvement, data analysis, program evaluation, assessment, and best practices in educational leadership and instruction. The program is nationally recognized by the National Council of Accreditation of Teacher Education as an educational leadership program.

The proposed hybrid program will allow students the opportunity to meet face-to-face and work on assignments online. Students in the program will have regular and easy access to the faculty via email, announcements posted in Moodle, and during face-to-face class meetings throughout the semester.

Existing resources will be utilized to implement the program via distance learning. All courses are offered using the University’s learning management system, Moodle. The program’s faculty has been trained to teach online. Thus, the delivery of course content will not require additional faculty.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves University of Louisiana at Lafayette’s request to offer an existing program online: the Master’s Degree Program in Educational Leadership.
July 23, 2015

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

Dear Dr. Woodley:

This is to request approval of a change in program delivery through Distance Learning Technologies, the Master’s Degree Program in Educational Leadership.

Please place this item on the agenda for consideration at the August 2015 meeting of the Board of Supervisors.

Sincerely,

[Signature]

E. Joseph Savoie  
President

Attachments
Request for Approval

Delivery of Degree/Certificate Program through Distance Learning Technologies

REQUEST FOR AUTHORITY TO OFFER AN EXISTING ACADEMIC PROGRAM THROUGH DISTANCE LEARNING TECHNOLOGIES
(Board of Regents, Academic Affairs Policy 2.12, revised June 2012)

1. College of Education

2. Educational Foundations and Leadership

3. Frank S. Del Favero, Ph.D. 482-6745 fdelfavero@louisiana.edu
   Name, Phone Number and Email Address of Contact Person

4. Master's Degree Program in Educational Leadership

5. 13.0401
   CIP Classification

6. Please briefly describe the program. If there are any differences between the program to be delivered via distance learning technologies and the program offered through the traditional mode of delivery (i.e., curriculum, admission, graduation requirements, etc.) please explain and provide a rational for such differences.

   The Master’s Degree Program in Educational Leadership is a 36 credit hour program that leads to certification in K-12 supervision. The course requirements address the knowledge, skills, and dispositions established by national and state leadership standards. Topics addressed include but are not limited to school vision, school improvement, data analysis, program evaluation, assessment, and best practices in educational leadership and instruction. The Program is nationally recognized by NCATE (National Council of Accreditation of Teacher Education) as an educational leadership program. All of the courses in the program have recently been converted to follow a “hybrid” online instructional model. Curricula, admission and graduation requirements remain the same.

   Four years ago, in an effort to stay current with evolving higher education recruitment strategies and instructional trends, we experimentally offered the first two courses in our sequence of courses as hybrid. They were both well received by the students because hybrid courses allowed them to:
   - Work at their own pace and at times of their own choosing to meet online course requirements.
   - Cut back on travel time and expenses from two nights per week to one night per week.
   - Co benefit from face-to-face meetings which the students felt were necessary from learning as well as from social and networking perspectives.

   Because of the overwhelming positive feedback on our first 2 hybrid courses, it was decided that we convert the remaining courses in the program to the hybrid format. Now that our entire master’s faculty has been trained to teach online and all of our courses have been converted to hybrid courses, we respectfully request that our program be officially recognized as an online program.

7. Please briefly describe the extent to which the program will be offered via distance learning technologies.

   Master’s Degree in Educational Leadership courses are offered as online hybrid courses. Degree candidates meet face-to-face on alternating weeks throughout an entire semester where they receive instruction according to traditional methods (lectures and class discussions). On alternating weeks, students work on online assignments (readings, videos, discussion forums, etc.).

8. Please describe any and all distance learning technologies which will be used to offer the proposed program.
   All of the courses are offered using “Moodle,” the University’s learning management system.

9. Please indicate where in the state (city/town and parish) the proposed program will be offered.
   The program serves students from the region served by the University of Louisiana at Lafayette.
10. Describe processes in place to ensure that students have structured access to faculty. 

Students in the program have regular and easy access to the faculty via email, announcements posted in Moodle, and during face-to-face class meetings that occur on alternating weeks throughout the semester.

<table>
<thead>
<tr>
<th>Faculty:</th>
<th>Degree:</th>
<th>Online Training:</th>
<th>Areas of Expertise:</th>
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</thead>
<tbody>
<tr>
<td>Cilesiz, Sebnem</td>
<td>Ph.D.</td>
<td>• Online Teacher Portfolio</td>
<td>• Curriculum</td>
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<td></td>
<td></td>
<td>• QM Rubric</td>
<td>• Qualitative Research</td>
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<td></td>
<td></td>
<td>• Teaching Hybrid</td>
<td>• Online teacher certification</td>
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<td></td>
<td></td>
<td>• QM Rubric</td>
<td>• Educational Leadership</td>
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<tr>
<td></td>
<td></td>
<td>• Course Design</td>
<td>• Measurement and Assessment</td>
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<tr>
<td>Del Favero, Frank</td>
<td>Ph.D.</td>
<td></td>
<td>• Online teacher certification</td>
</tr>
<tr>
<td>Growe, Roslin</td>
<td>Ed.D.</td>
<td>• QM Rubric</td>
<td>• Educational Leadership</td>
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<td></td>
<td></td>
<td>• Sloan 1</td>
<td>• Online teacher certification</td>
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<tr>
<td></td>
<td></td>
<td>• Sloan 2</td>
<td></td>
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<td></td>
<td></td>
<td>• Sloan 3</td>
<td></td>
</tr>
<tr>
<td>Myers, Bertha</td>
<td>MA</td>
<td>• Teaching Hybrid</td>
<td>• Educational Leadership</td>
</tr>
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<td></td>
<td></td>
<td>• Sloan ET</td>
<td>• Intern Supervisor</td>
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<td></td>
<td></td>
<td>• Sloan</td>
<td>• Online teacher certification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• M2 Quizzes</td>
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<td></td>
<td></td>
<td>• M2 Adding Activities</td>
<td></td>
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<td></td>
<td>• M2 Checklist</td>
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<td>• M2 Personalizing</td>
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<td>• M2 Blocks</td>
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<td>• M2 Gradebook</td>
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<td>• M2 Basics</td>
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<td></td>
<td></td>
<td>• Sloan 3</td>
<td></td>
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<td></td>
<td></td>
<td>• Sloan 2</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Sloan 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Course Design</td>
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<td></td>
<td></td>
<td>• BlackBoard Collaborate</td>
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<tr>
<td></td>
<td></td>
<td>• QM Rubric</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• QM Rubric</td>
<td></td>
</tr>
<tr>
<td>Roberts, Nathan</td>
<td>Ph.D., J.D.</td>
<td>• Teaching Hybrid</td>
<td>• Educational Leadership</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Share Fair 2014</td>
<td>• School Law</td>
</tr>
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<td></td>
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<td>• Course Design</td>
<td>• Online teacher certification</td>
</tr>
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<td></td>
<td></td>
<td>• QM Rubric</td>
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<td></td>
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<td>• Sloan 1</td>
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<td></td>
<td>• Sloan 2</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Sloan 3</td>
<td></td>
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<td></td>
<td>• Elluminate</td>
<td></td>
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<tr>
<td>Trahan, Mitzi</td>
<td>Ph.D.</td>
<td>• QM Rubric</td>
<td>• Research Methodology</td>
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<td>• QM Rubric</td>
<td>• Quantitative Research</td>
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<td>• Intro to Online Learning</td>
<td>• Online teacher certification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• QM Rubric</td>
<td></td>
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</tbody>
</table>

**Teaching loads vary based on enrollment and assignments at the undergraduate, master's, and doctoral levels. Loads vary from 2 to 4 courses per semester.**

Please note that the transition of our program from traditional (face-to-face) to hybrid (i.e. blended) delivery of course content will require no additional staff.

RECEIVED
SEP 29 2014
GRADUATE SCHOOL
By signing below, you acknowledge support of this application.

Dianne S. Oliver  9/24/14

Department Head Signature  Date

Matt Palats  7/25/14

College Dean Signature  Date

Graduate School Dean (if Graduate Certificate or Program)  Date

Upon approval of this request by the Board of Regents the campus must then submit notification to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) prior to implementation (consult SACSCOC’s “Substantive Change for Accredited Institutions of the Commission on Colleges” Policy Statement). Once the SACSCOC provides a letter acknowledging acceptance of this notification to the campus, a copy should be provided to the Board of Regents.

Provost/Vice Chancellor for Academic Affairs  10/13/14  Date

Campus Head (or Authorized Signature)  System Head (or Authorized Signature)

For Office Use Only

Decision of Distance Learning Leadership Council

___ Recommend to the Academic Affairs Council

___ Do not recommend to the Academic Affairs Council

Date of Decision - ____________________________

Additional Information:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Item E.14. University of Louisiana at Lafayette’s request for approval of a Letter of Intent to offer a Master of Science degree program in Environmental Resource Science.

EXECUTIVE SUMMARY

University of Louisiana at Lafayette requests approval of a Letter of Intent to offer a Master of Science degree in Environmental Resource Science. The proposed program is being designed to increase the pipeline of highly trained students who can address challenges related to Louisiana’s environmental resources. The M.S. in Environmental Resource Science will focus primarily on water and soil resources.

The proposed 35-hour curriculum will have both thesis and non-thesis options. The program will be interdisciplinary, combining a variety of the foundational science domains that were identified in the FIRST Louisiana report. Environmental Resource Science is both strategic for Louisiana and aligned with Louisiana’s workforce needs. The focus of the program in combination with the University’s Gulf Coast location and the expertise of the associated faculty will make this a premier program for Louisiana and throughout the region. As well, it will further advance Louisiana as a national leader in environmental research and development.

The Louisiana Workforce Commission indicates that Environmental Science is a high demand job for Louisiana. There are projected to be 80 annual job openings over the next decade for Environmental Scientists and Specialists. 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. Although some environmental science jobs are obtainable with a Bachelor of Science degree, there are considerable advantages for students who earn a graduate degree in Environmental Science. In most areas of Environmental Science, earning a graduate degree will provide students with more career options, positions of greater responsibility, and increased pay.

Currently, there are two M.S. level programs in Environmental Science in Louisiana. Louisiana State University offers an M.S. degree in Environmental Science and McNeese State University offers an M.S. degree in Environmental and Chemical Science. ULL’s program differs from these programs in that the programmatic focus is on water and soil resources.

The University will recruit students who possess Bachelor degrees in Environmental Science, Geology, Biology, Physics, and Chemistry. The number of annual graduates in the programs referenced suggests that there would be an immediate and large demand for the proposed program. The M.S. in Environmental Resource Science would provide a new and compelling opportunity for these graduates.
ULL's Master of Science in Environmental Resource Science will be self-sufficient. Courses for the proposed program are already in existence. Ultimately, the M.S. in Environmental Resource Science can be fully implemented with little new costs to the institution. Existing resources, including faculty, supplies, library holdings, and facilities will be adequate to support 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 University of Louisiana at Lafayette’s Letter of Intent to offer a Master of Science degree program in Environmental Resource Science.
July 23, 2015

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

Dear Dr. Woodley:

This is to request approval of a Letter of Intent to Develop a New Academic Program, the Master of Science in Environmental Science.

Please place this item on the agenda for consideration at the August 2015 meeting of the Board of Supervisors.

Sincerely,

E. Joseph Savoie  
President

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

General Information

<table>
<thead>
<tr>
<th>Campus:</th>
<th>Program: Title, CIP, Degree/Certificate Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Louisiana at Lafayette</td>
<td>Environmental Resource Science; CIP 03.0199, Master of Science in Environmental Resource Science</td>
</tr>
</tbody>
</table>

Institutional Contact Person & Access Info (if clarification is needed):
- Dr. David M. Borrook, Director
- School of Geosciences
- Ray P. Authement College of Sciences
- University of Louisiana at Lafayette
- (337)-482-2888
- dborrook@louisiana.edu

1. Program Objectives and Content

Describe the program concept: purpose and objectives; basic structure and components/concentrations; etc.

PURPOSE AND OBJECTIVES

The purpose of our program is to increase the pipeline of highly-trained students who can address challenges related to Louisiana’s environmental resources. This master’s degree program will focus primarily on water and soil resources, including their investigation/characterization, management, remediation, and associated technologies. Students also will be able to probe the relationships of these physical resources with biological processes. The objectives of our program are as follows: (1) To provide a superb curriculum with complementary research and internship experiences for training and educating students in the field of environmental resource science, (2) To prepare our students for a wide variety of possible careers in the environmental arena, and (3) To develop a highly-skilled, critical-thinking workforce for that will benefit the state of Louisiana.

Our program will be interdisciplinary, combining a variety of the foundational science domains (e.g., physical, earth, and biological sciences) that were identified in the FIRST Louisiana report. Environmental Resource Science is both strategic for Louisiana and aligned with Louisiana's workforce needs (i.e., is a key transitional research domain). 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 also hosts 40% of the nation’s freshwater wetlands, which are critical to the seafood industry and serve to mitigate coastal flooding. Like water, soil resources are fundamental for agricultural activities and coastal restoration efforts.

The focus of our program in combination with our Gulf-coast location and the expertise of the associated faculty will make this a premier program for Louisiana and throughout the region. Our program in Environmental Resource Science will further advance Louisiana as a national leader in environmental research and development.

RESOURCES

Primary Faculty with appropriate graduate faculty status
- Dr. Durga Poudel; Professor, Environmental Science
- Dr. Jenneke Visser; Associate Professor, Environmental Science
- Dr. Katie Costigan; Assistant Professor, Environmental Science
- Visiting Assistant Professor, Environmental Science. This position is currently filled by Dr. Rajith Mukundan. We anticipate continuing this arrangement or filling the position permanently in the future.
- Dr. Brian Schubert; Assistant Professor, Geology
- Dr. Carl Richter; Professor, Geology
- Dr. David Borrook, Professor, Geology
- Dr. Tim Duex, Associate Professor, Geology
Supporting faculty from other disciplines with appropriate graduate faculty status:

- Dr. Paul Leberg; Professor, Biology
- Dr. Mark Hester; Professor, Biology
- Dr. Paul Klerks; 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

Graduate Assistantships (number, funding source, full or tuition-waiver only):
UL Lafayette will 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. 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 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.

Labs:
We do not require any additional laboratory space for this program. We have high-quality research labs and instrumentation in Hamilton Hall (B08, B07, B09, 215, 219B). These are shared facilities within the School of Geosciences.

Other Physical Facility Needs:
We do not require additional room for research space, classrooms, or faculty and staff offices at this time. We will, however, require additional space for graduate research assistants and teaching assistants. It is important for teaching assistants to hold office hours in a consistent location where students from their courses can come to ask questions. It is also important that graduate research assistants have space near to the labs where they work so that faculty can appropriately supervise them.

Other Resources Needed:
None. We have the necessary space, faculty, and administrative support within the School of Geosciences to advance this program.

Competitive/Similar Programs in Louisiana and in Neighboring States:
There are currently two MS-level programs in Environmental Science in the state of Louisiana. LSU offers a 36-credit hour MS degree in “Environmental Science.” This program has a CIP code of 03.0104, which is earmarked specifically for Environmental Science. Twenty-three, 9, 17, 7, and 9 students graduated from this program in the 2013-14, 2012-13, 2011-12, 2010-11, and 2009-10 academic years, respectively. The LSU Environmental Science program includes thesis and non-thesis options and has focus areas in (1) Biophysical systems, (2) Environmental planning and management, and (3) Environmental assessment and analysis. All students enrolled in this program take a common course titled “Integrated Environmental Issues” (3hrs) and a seminar course (1hr). The remaining 32 credit hours can be tailored from a list of approved courses. Six hours of thesis work are earmarked for the thesis option, while these 6 hours are used for additional courses and/or internships for the professional option.

McNeese State University offers a MS degree in “Environmental and Chemical Science.” This program has a CIP code of 40.0599, which places it in the “Chemistry” category. Twelve, 19, 30, 17, and 12 students graduated from this program in the 2013-14, 2012-13, 2011-12, 2010-11, and 2009-10 academic years, respectively. McNeese’s program includes thesis (37 hours) and non-thesis (31 hours) options and is comprised of coursework in the disciplines of Chemistry, Agricultural Sciences, and Environmental Science.

Tulane and the University of New Orleans have programs in Earth and Environmental Science at the MS-level, but these are Geology or Geoscience-based programs. The CIP code for these programs reflects their focus on Geosciences.
Programs offering MS-degrees in Environmental Science or Environmental Studies in the surrounding region include the University of Houston Clear-Lake and Lamar University.

Why our program is different:
Our proposed program is in Environmental Resource Science (CIP 03.0199) with water and soil resources as the central theme. Although the other MS programs in Environmental Science (CIP 03.0104) or Environmental Chemistry (CIP 40.0599) are healthy and have courses that address water and soil resources among their offerings, this is clearly not their programmatic focus.

On-line Delivery Possible/Probable/Feasible?
Dr. Durga Poudel is a “Certified Course Designer” for distance learning at UL Lafayette. In addition to his participation in a series of distance learning workshops, Dr. Poudel successfully completed the 10-week “Course Design Practicum” for distance learning offered by UL Lafayette’s Office of Distance Learning. Dr. Poudel is planning on developing a Hybrid online course on “Surface Water Quality” that can be used within our program.

Consortial Delivery Possible? With what institution(s)?
Our program will be self-sufficient. It is supported by highly-qualified faculty with unmatched expertise in the fields of water and soil resources. The vast majority of the necessary courses are already available and being taught at UL Lafayette.

Other Special Considerations:
Through our current undergraduate program in Environmental Science, we have developed a broad network of collaborators and partnerships in Louisiana that will become even more useful for the graduate program (see “Institutional Partnerships” below).

Adjunct Faculty: Adjuncts help to support research, teaching, and in some cases can serve on graduate thesis committees.
- Dr. Thomas Doyle – US. Geologic Survey, National Wetlands Research Center
- Dr. Ken Krauss – US. Geologic Survey, National Wetlands Research Center
- Mr. Bill Schramm – Louisiana Department of Environmental Quality

Institutional Partnerships: These organizations are already partnering with us to support Environmental Science student internships at the undergraduate level.
- 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
- US Geological Survey National Wetlands Research Center
BASIC STRUCTURE AND COMPONENTS/CONCENTRATIONS

Prerequisites

Prerequisites for acceptance into the MS Program of Environmental Resource Science include a Bachelor’s degree in a related scientific or engineering field. At a minimum, the completion of the following general science requirements (or their equivalents) is expected: CHEM 108, 115; BIOL 110, 111, 112, 113; PHYS 207, 208, 215, 216; MATH 143, 250. In addition, the following undergraduate leveling courses may be required for students admitted to the program without the necessary background in Environmental Science (ENVS 100, 285, 455, 464; GEOL 111). Substitutions may apply to the leveling course requirements and will be determined on a case-by-case basis by the Environmental Science graduate committee. An undergraduate GPA of at least 3.0, satisfactory GRE scores, and three supportive letters of recommendation are amongst the criteria used for admission evaluation.

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

We propose a 35-hour curriculum with thesis and non-thesis options. Courses within our degree program have been organized into the categories of (1) Water Resources, (2) Soil Resources, (3) Environmental Methods (applied to water and soil resources), and (4) Biophysical Relationships. Our proposed program relies on 47 graduate courses already in existence at UL Lafayette, creating a diverse and exhaustive curriculum that offers a good indication of our established strength in this field. The Water Resources, Soil Resources, and Environmental Methods (applied to water and soil resources) courses constitute the program core. The Water and Soil Resources courses will provide students with a scientific foundation for addressing challenges within the field of environmental resources, while 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 interface of soil and water resources with biological systems. In addition to this rich curriculum, we will create 5 new program-specific courses (see Table 2 below).

Substantial flexibility is built into the program regarding which courses 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 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 is important for the development of a broad-based applied science program, but at the same time allows for an appreciable level of specialization. We feel 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 that are specific to Louisiana.

Thesis Option:

- Thesis = 6 hours
- Seminar = 2 hours
- Water Resources = 6 hours (*denotes a required course in Table 2)
- Soil Resources = 6 hours (*denotes a required course in Table 2)
- Environmental Methods = 3 hours
- Electives = 12 hours. Any of the approved courses (Table 2) with no more than 9 hours from the Biophysical Relationships category.
- Before or in the early stages of thesis research, the student will submit a written research proposal for approval by their advisor and thesis committee.

Non-Thesis Option:

- This will be identical to 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 the graduate committee 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 graduate
committee members of the Environmental Science Program.

The Internship (ENVS 579, 6hrs) must include the equivalent of 1 semester of part-time work with an industry partner. Prior to initiation of the internship, the student will be required to develop a plan with the company/agency and his/her graduate faculty advisor as to what requirements or products are expected. At a minimum, the student will complete a final written report and 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 graduate committee members of the Environmental Science program in conjunction with the industry partner. We have already lined up a variety of industry partners for participation in the internship program (see list below).

Degree requirements:
1. 400-level courses taken for undergraduate credit prior to acceptance in the MS-degree program will NOT count toward the course requirements for the graduate degree.
2. At least 12 credit hours of 500-level courses that count toward the degree must be taken.
3. Students who may have already completed a required course within another program may substitute a different course within the same category. The course substitution must be approved by the graduate committee of the Environmental Science program.
4. For the thesis option, a written thesis proposal and oral proposal defense are required. This must be completed at least one semester before the graduating semester.
5. For the thesis option, a written thesis is required.

Courses:

Table 2. Courses for MS-degrees in Environmental Resource Science.

<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><strong>Program-specific courses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVS 559</td>
<td>Environmental Resources Seminar (1, 0, 1)</td>
<td>100</td>
<td>All core faculty</td>
<td>*New Course</td>
</tr>
<tr>
<td>ENVS 569</td>
<td>Special Topics (3, 0, 3).</td>
<td>NA</td>
<td>All core faculty</td>
<td>New Course</td>
</tr>
<tr>
<td>ENVS 579</td>
<td>Internship (6hrs)</td>
<td>NA</td>
<td>All core faculty</td>
<td>New Course</td>
</tr>
<tr>
<td>ENVS 589</td>
<td>Capstone Project (3hrs)</td>
<td>NA</td>
<td>All core faculty</td>
<td>New Course</td>
</tr>
<tr>
<td>ENVS 599</td>
<td>Thesis hours (6hrs)</td>
<td>NA</td>
<td>All core faculty</td>
<td>New Course</td>
</tr>
<tr>
<td><strong>Water Resources</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<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. Prereq: ENVS 100, 150, 151, and 285. Restr: Permission of instructor required.</td>
<td>30</td>
<td>Visser</td>
<td>Existing</td>
</tr>
<tr>
<td>*ENVS 484(G)</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. Prereq: CHEM 107, 115, and ENVS 285.</td>
<td>35</td>
<td>Poudel; Borrok; Mukundan</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. Prereq: CHEM 101, 240; ENVS 285.</td>
<td>35</td>
<td>Poudel; Borrok; Mukundan</td>
<td>Existing</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Units</td>
<td>Description</td>
<td>Instructor(s)</td>
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<tr>
<td>GEOL 431(G)</td>
<td><strong>INTRODUCTION TO GEOCHEMISTRY.</strong> <em>(3, 0, 3).</em> Introduction to the concepts and principles of Geochemistry. Prereq: GEOL 292 and CHEM 107. If prerequisites not met permission of instructor required.</td>
<td>40</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 440(G)</td>
<td><strong>OCEANOGRAPHY.</strong> <em>(2, 2, 3).</em> 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)</td>
<td><strong>GROUND WATER.</strong> <em>(3, 0, 3).</em> Occurrence, movement, distribution, and discussion of problems associated with supply and change in composition of ground water. Prereq: GEOL 292, 314 or permission of instructor.</td>
<td>70</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>*GEOL 510</td>
<td><strong>ADVANCED ENVIRONMENTAL GEOLOGY.</strong> <em>(2, 3, 3).</em> Content varies. May be repeated for credit. Application of Geology to problems resulting from the increasingly intense use of the earth and its resources. Restr: Permission of instructor required.</td>
<td>35</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 509</td>
<td><strong>ADVANCED GROUND WATER HYDROLOGY.</strong> <em>(3, 0, 3).</em> 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>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 532</td>
<td><strong>PETROLEUM GEOCHEMISTRY.</strong> <em>(2, 3, 3).</em> Concepts and principles of Geochemistry. Course includes examination of natural samples. Prereq: GEOL 292, CHEM 108 or permission of instructor required.</td>
<td>45</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>*BIOI 407(G)</td>
<td><strong>ENVIRONMENTAL TOXICOLOGY.</strong> <em>(3, 3, 4).</em> 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. Prereq: BIOI 110, 111; CHEM 107, or permission of instructor required.</td>
<td>20</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOI 441(G)</td>
<td><strong>LIMNOLOGY AND OCEANOGRAPHY.</strong> <em>(3, 3, 4).</em> 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. Prereq: BIOI 203 CHEM 108, and MATH 140 or 143, or equivalents.</td>
<td>25</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>CIVE 506</td>
<td><strong>ADVANCED HYDROLOGY.</strong> <em>(3, 0, 3).</em> Quantitative approaches for modeling rainfall-runoff processes. Topics include lumped and distributed models, treatment of spatial and temporal hydrologic variability, hydrologic data quality control, and design of hydrologic networks. Restr: Permission of instructor required.</td>
<td>20</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>CIVE 546</td>
<td><strong>PROBABLISTIC METHODS IN HYDROSCIENCE.</strong> <em>(3, 0, 3).</em> General review of advanced probability and statistics concepts, Monte Carlo simulation of hydro-systems, probabilistic models of observed hydrologic data, optimal estimation and interpolation of geophysical fields. Use of data-intensive computer applications is emphasized. Restr: Permission of instructor required.</td>
<td>20</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>CIVE 561</td>
<td><strong>WATER TREATMENT.</strong> <em>(3, 0, 3).</em> Design of domestic and industrial water treatment facilities with emphasis on the basic scientific principles underlying the design procedures. Prereq: CIVE 321 or permission of instructor required.</td>
<td>25</td>
<td>Richter</td>
<td>Existing</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites/Restrictions</td>
<td></td>
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<tr>
<td>ENV 490(G)</td>
<td>ENVIRONMENTAL PEDOLOGY. (3, 0, 3). Soil-solute interactions occurring as a result of natural and human activities. Prereq: ENV 285 or permission of instructor required.</td>
<td>35</td>
<td>Poudel; Mukundan</td>
<td></td>
</tr>
<tr>
<td>ENV 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. Prereq: ENV 285 or permission of instructor required.</td>
<td>35</td>
<td>Mukundan; Visser; Foret</td>
<td></td>
</tr>
<tr>
<td>ENV 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; Mukundan</td>
<td></td>
</tr>
<tr>
<td>ENV 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. Prereq: ENVS 285 or permission of instructor required.</td>
<td>35</td>
<td>Mukundan; Poudel</td>
<td></td>
</tr>
<tr>
<td>ENV 580(G)</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. Prereq: CHEM 101, 240; ENV 285.</td>
<td>35</td>
<td>Poudel; Mukundan; Borrok</td>
<td></td>
</tr>
<tr>
<td>GEOL 433(G)</td>
<td>CLAY MINERAOLOGY. (2, 2, 3). Classification, identification, occurrence, and properties of clays. Prereq: GEOL 339; CHEM 108, or permission of instructor.</td>
<td>50</td>
<td>Schubert; Mukundan; Poudel</td>
<td></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. Restr: Permission of instructor required.</td>
<td>35</td>
<td>Duex; Schubert; Borrok</td>
<td></td>
</tr>
<tr>
<td>BIOL 407G</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. Prereq: BIOL 110, 111; CHEM 107, or permission of instructor required.</td>
<td>20</td>
<td>Biology Faculty</td>
<td></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. Prereq: CIVE 321 or permission of instructor required.</td>
<td>30</td>
<td>Civil Engineering Faculty</td>
<td></td>
</tr>
</tbody>
</table>

**Environmental Methods**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Faculty/Instructor</th>
<th>Restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 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: ENV 455(G) or GEOL 330.</td>
<td>30</td>
<td>Richter; Yantis</td>
<td>Existing</td>
</tr>
<tr>
<td>ENV 487(G)</td>
<td>ADVANCED GIS ANALYSIS AND APPLICATIONS. (2, 2, 3). Prereq: ENV 464(G) and ENV 473(G).</td>
<td>30</td>
<td>Yantis</td>
<td>Existing</td>
</tr>
<tr>
<td>ENV 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: Prereq. Literacy in Micro-Computers.</td>
<td>20</td>
<td>Yantis</td>
<td>Existing</td>
</tr>
<tr>
<td>ENV 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: ENV 455(G)</td>
<td>20</td>
<td>Yantis</td>
<td>Existing</td>
</tr>
<tr>
<td>GEOL 420(G)</td>
<td>GEOPHYSICS I. (3, 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. Prereq: MATH 270; PHYS 208, 216. Restr: If prerequisites not met permission of instructor required.</td>
<td>50</td>
<td>Geology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Units</td>
<td>Department</td>
<td>Status</td>
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</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 routines. Prereq: One course in computer literacy or programming, and a statistics course. Restr: If prereq. not met, permission of instructor is required.</td>
<td>30</td>
<td>Geology Faculty</td>
<td>Existing</td>
</tr>
<tr>
<td>ENVS 460(G)</td>
<td>SITE ASSESSMENT AND REMEDIATION. (3, 0, 3). Assessment and remediation of contaminated water sites and other geologic situations; includes risk and hazard analysis. Prereq or Coreq: GEOL 470 or permission of instructor.</td>
<td>35</td>
<td>Geology Faculty and adjuncts</td>
<td>Existing</td>
</tr>
<tr>
<td>BIOL 418(G)</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. Prereq: BIOL 110: CHEM 108.</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, 6, 3). Examination of laboratory techniques for assessing water quality and sludge contamination. Optical, electrical, gas chromatography, and x-ray methods are included. Prereq: Students must have taken CIVE 321 or equivalent course, or permission of instructor required.</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). Prereq: CHEM 221, CHEM 222, CHEM 301 or CHEM 303.</td>
<td>15</td>
<td>Chemistry Faculty</td>
<td>Existing</td>
</tr>
</tbody>
</table>

Biophysical Relationships

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</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 conservations of birds. Prereq: BIOL 215. 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. Prereq: BIOL 203. Restriction: if</td>
<td>25</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., 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, etc.

WELL-BEING OF THE STATE

We shaped the focus and structure of our program to match the most recent developments associated with Louisiana’s workforce needs and projected growth areas. Our program captures recommendations put forth in the FIRST Louisiana report and the BOR 2011 Master Plan, targeting 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 the development of new academic programs in interdisciplinary applied sciences such as the one we present here.

Our program 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.”
Our 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 (water, soil, etc.) 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 business attraction and retention 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 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 we present here.
“Recruit, cultivate, and retain research talent in the foundational sciences.”
The addition of a master’s degree program will allow us to greatly expand our research in water and soil resources, which will attract quality research-active faculty and provide an incentive for us to keep them.

“Develop and maintain cutting-edge infrastructure and facilities for fundamental science and technology research.”
Although we already have cutting-edge laboratory and field facilities, the master’s degree program will provide new opportunities to advance our infrastructure. We can 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. Our program is built 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, our curriculum includes the possibility of course work in all 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 for our program from outside the School of Geosciences (in Civil Engineering, Chemistry, and Biology).

“Address multi-disciplinary and multi-institutional collaborations in campus research plans.”
Our multidisciplinary approach reflects the University of Louisiana at Lafayette’s strategic plan for advancing multidisciplinary research.

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. This includes an emphasis on hands-on training and internship opportunities. Our program will remain tightly connected to industry, which can enhance commercialization and translational research.

“Promote Multidisciplinary and Multi-Institutional Collaborative Research Efforts.”
As described in Goal 2, Objective 2.2 (above), our programmatic concentration areas include courses from multiple disciplines, which 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.

EMPLOYMENT PROJECTIONS
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 3). 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
Although some environmental science jobs are obtainable with a BS degree, there are considerable advantages for students who earn a graduate degree in Environmental Science. In most areas of Environmental Science, earning a graduate degree will provide students with more career options, positions of greater responsibility, 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 would start out as a GS 9, making around $48,000 annually. 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 26.8%, with the MS-degree holders having the higher salaries.

Table 3. Louisiana Workforce Commission Occupational Projections

<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 directly related to science and engineering associated with coastal restoration activities are estimated to range from 16,341 to 22,716 new jobs per year for the next 50 years (Ryan, 2014; *The economic impact of coastal restoration and hurricane protection*; Tulane Institute on Water Resources Law and Policy). A measurable portion of these jobs could be filled by Environmental scientists. The need for Environmental Scientists is also growing nationally. Job growth is expected to be around 15% over the next decade, which is substantially faster than the national average for all jobs (Table 4; Figure 1).


<table>
<thead>
<tr>
<th></th>
<th>2012 Median Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$63,570 per year</td>
</tr>
<tr>
<td></td>
<td>$30.56 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, 2012</td>
<td>90,000</td>
</tr>
<tr>
<td>Job Outlook, 2012-22</td>
<td>15% (Faster than average)</td>
</tr>
<tr>
<td>Employment Change, 2012-22</td>
<td>13,200</td>
</tr>
</tbody>
</table>
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.” At the national level, 36% of environmental science jobs fall within the area of “Professional, Scientific, and Technical Services, while 20% fall within “Management, Scientific, and Technical Consulting Services.” Thirty two % of Environmental Science jobs are associated with state and local governments.

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 of the state’s adult population or foster innovation through research.

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 Research University with high research activity. In addition to the pursuit of excellence in education and research at all levels, the mission of the University is to promote regional economic and cultural development, to explore solutions to national and world issues, and to advance its reputation among its peers. Our proposed master’s program in Environmental Resource Science would strengthen UL Lafayette’s existing role as a developing research university and support UL Lafayette’s mission by producing graduates who will strengthen the local and regional economy and be able to use their expertise to help find solutions to societal issues at the state, national, and global levels.

The proposed MS program in Environmental Resource Science is an institutional priority for UL Lafayette because it will provide new opportunities for our students, increase the number of students receiving STEM degrees, and support the strategic directions for research at 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 our master’s level program on water (and soil) resources fits perfectly within the strategic research and educational interests of our university.

4. Students

Summarize student interest/demand for the proposed program.

We will be able 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 would have an immediate and large demand for this program. For example, Biology, Chemistry, and Geology respectively graduate around 70, 15, and 10 students annually. Our proposed MS 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 68 in Fall 2014 (we are expecting close to 80 in Fall 2015). We are actively recruiting students for our program and have recently developed a 2+2 relationship with Southwest Louisiana Community college (although the paperwork is still pending approvals).

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% were already planning on obtaining 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 pursuing 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.

Projected Student Enrollment:

Table 1. Projected enrollments and student funding mechanisms for years 1-5.

<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>

The enrollment projections in Table 1 are conservative, based on the analysis of enrollment patterns for similar programs. 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, which is higher than our projected enrollments in year 5.

In addition to these projections, 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’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 people 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. Finally, UL Lafayette’s BS degree program in Environmental Science that began in 2011 already has more than 60 enrolled students, which is on a track to graduate about 10 students a year. Hence, in combination, the production of students graduating with BS-degrees in Environmental Science in Louisiana alone is (or will shortly be) 45 to 50 students annually. This — along with growth in majors in other environmentally-relevant programs at UL Lafayette and throughout the state in areas such as Biology, Geology, and Chemistry — will provide a rich pipeline for graduate students in our program.

One of our initial recruiting strategies will be to send out recruiting information to all environmental science programs that offer BS degrees in the Gulf Coast region. We will additionally use the GRE exam service to obtain a list of potential candidates for our program and will reach out to all of them via e-mail. This has been an enormously successful recruiting tactic for our other graduate programs. In addition to these efforts, we plan to build a social media and web-based recruitment initiative.
5. Cost

Estimate costs for the projected program for the first five years. Indicate amounts to be adsorbed out of current sources of revenue and needs for additional appropriations (if any). Commit to provide adequate funding to initiate and sustain the program.

Our 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 necessary investment in the success of the program. Besides the four graduate assistantships requested from UL Lafayette, many will be funded by external research funds and by industry partners, either through the creation of company-sponsored assistantship or corporate funding as a business recruiting tool for graduates. Finally, Master's students will have full access both to the UL Lafayette and the LSU libraries, as well as resources provided through the LOUIS consortium, so no additional library costs are anticipated.

CERTIFICATION:

[Signature]
Chief Academic Officer

[Signature]
Chancellor/President

[Signature]
Management Board

6/15/15
Date

6/19/15
Date

Date
Item E.15. University of Louisiana at Monroe’s request for approval of a First Amendment to the Memorandum of Understanding between the University of Louisiana at Monroe and the National University Corporation Ehime University in Japan.

EXECUTIVE SUMMARY

The University of Louisiana at Monroe requests approval of a First Amendment to the Memorandum of Understanding (MOU) between the University of Louisiana at Monroe and the National University Corporation Ehime University in Japan.

The initial agreement, executed on March 5, 2012, provides for short-term study abroad and longer-term (one semester or greater) exchange study opportunities for undergraduate and graduate students. Collaborative teaching and research opportunities have also been afforded to faculty.

ULM would like to amend the agreement to change the titles from “Agreement for Academic Exchange” to “Memorandum of Understanding for Academic Exchange” and “Memorandum on Student Exchange” will be changed to “Agreement on Student Exchange.” As well, the scope of the agreement will be expanded to be university-wide for both the MOU and the Agreement of Student Exchange. The amendment will also include insurance and non-discrimination clauses.

The proposed amendment appears to be consistent with similar cooperative agreements with international universities.

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 approval of First Amendment to the Memorandum of Understanding between the University of Louisiana at Monroe and the National University Corporation Ehime University in Japan.
July 21, 2015

Dr. Sandra Woodley
President
University of Louisiana System
1201 North Third Street 7-300
Baton Rouge, LA 70802

Dear Dr. Woodley:

I respectfully request consideration and approval of a First Amendment to Memorandum of Understanding between the University of Louisiana at Monroe and the National University Corporation Ehime University in Japan.

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

Sincerely,

Nick J. Bruno, Ph.D.
President
FIRST AMENDMENT

to
MEMORANDUM OF UNDERSTANDING
between
NATIONAL UNIVERSITY CORPORATION EHIME UNIVERSITY, JAPAN
and
UNIVERSITY OF LOUISIANA AT MONROE, USA

THIS FIRST AMENDMENT (Amendment) is in regards to that certain Memorandum of Understanding (MOU) between the National University Corporation Ehime University (EU) and the University of Louisiana at Monroe (ULM) executed the March 5, 2012, a copy of which, together with any and all amendments made subsequent to such MOU, is attached hereto and incorporated herein by reference.

This Amendment shall be effective on __________________ and shall serve to amend the MOU as further described herein. Unless modified by this Amendment or otherwise, all other provisions of the MOU and amendments thereto shall remain in effect.

EU and ULM now desire to amend the MOU as follows:
1) The following amendments are proposed by EU.
   a. The title ‘Agreement for Academic Exchange’ be changed to ‘Memorandum of Understanding for Academic Exchange’, and the ‘Memorandum on Student Exchange’ be changed to the ‘Agreement on Student Exchange’
   b. The scope of the agreement be expanded to be university-wide for both the MOU and the Agreement for Student Exchange.
   c. The following two clauses be included:

Insurance
All exchange students must have sufficient insurance coverage during their stay in the foreign country. The type of insurance may vary according to the length of time. Each university is responsible for advising the student as to what kind of insurance is required.

Non-Discrimination
Both parties subscribe to the policy of equal opportunity and do not discriminate on the basis of race, sex, age, ethnicity, religion, sexual preference, national origin or disability. Both parties shall abide by these principles in the administration of this Agreement.

The parties hereto have executed this Amendment as of the effective date written above.

Ehime University

Yuichi Ohashi
President

University of Louisiana at Monroe

Nick J. Bruno, Ph. D
President
AGREEMENT FOR ACADEMIC EXCHANGE
BETWEEN
UNIVERSITY OF LOUISIANA AT MONROE, U.S.A.
AND
FACULTY OF EDUCATION,
NATIONAL UNIVERSITY CORPORATION EHIME UNIVERSITY, JAPAN

University of Louisiana at Monroe, U.S.A., and Faculty of Education, National University Corporation Ehime University, Japan, hereby agree to promote cooperation and exchange in education and research between the two universities.

1. Both universities will work to realize the following, in a manner consistent with the applicable laws and regulations of the both countries:
   (1) Exchange of students
   (2) Exchange of faculty members
   (3) Collaboration in research and development

2. Both universities will consult each other about the contents above upon their actual realization.

3. In implementing this agreement, each university is responsible in principle for all related expenses which concern each university.

4. This agreement becomes effective on the date of signature and is valid for five years. However, it can be amended or renewed through consent of both universities. It may also be terminated at any time by any one of the universities by giving a notice of termination in writing no later than six months in advance.

5. This agreement is prepared in English and Japanese and both texts shall be regarded as official. Two signed copies in each language will be prepared and both parties will keep one of each.

Nick J. Bruno, Ph.D.
President
University of Louisiana at Monroe
The United States of America

Date: 2012.3.5

Kotobuki Takuzo
Dean
Faculty of Education
National University Corporation
Ehime University, Japan

Date: 2012.2.5
MEMORANDUM ON STUDENT EXCHANGE
BETWEEN
UNIVERSITY OF LOUISIANA AT MONROE, U.S.A.
AND
FACULTY OF EDUCATION,
NATIONAL UNIVERSITY CORPORATION EHIME UNIVERSITY, JAPAN

Based on the “Agreement for Academic Exchange between University of Louisiana at Monroe, U.S.A. and Faculty of Education, National University Corporation Ehime University, Japan,” both parties agree to conclude a Memorandum of Agreement as specified in the following articles to facilitate smooth implementation of the student exchange pursuant to Section 1 (I) on the basis of Section 2.

1. Categories of Exchange Program
   Both parties agree to establish two categories of exchange program: “Cultural and Educational Tour” and “Student Exchange.”

2. Status of Exchange Students
   With respect to Cultural and Educational Tour, its participants have the status of “Visiting Students” at University of Louisiana at Monroe (ULM) and “Short-term International Student” at Ehime University (EU). With respect to Student Exchange, its participants have the status of “Exchange Students” at ULM and “Special Auditor” or “Special Research Student” at EU.

3. Number of Students
   With respect to Cultural and Educational Tour, both parties agree to exchange up to about 10 students in either undergraduate or graduate level in each academic year. With respect to Student Exchange, both parties agree to exchange up to two students in the undergraduate or graduate level in each academic year. Both parties shall undertake effort to receive the equivalent number of students in both institutions.

4. Duration of Exchange
   With respect to Cultural and Educational Tour program, the period of student exchange is about two weeks in principle. With respect to Student Exchange program, the period of student exchange is up to one academic year in principle.

5. Academic fees
   Both parties shall waive application, admission, and tuition fees of hosted students.

6. Evaluation
   Academic achievements earned at the host institution shall be evaluated by the home institution according to the latter’s stipulations.
国立大学法人愛媛大学教育学部とルイジアナ大学モンロー校との
学術交流に関する協定書

日本国 国立大学法人愛媛大学教育学部とアメリカ合衆国 ルイジアナ大学モンロー校
は、教育及び研究の協力と交流を促進するため、ここに学術交流に関する協定を締結する。

1. 両者は、両国関係諸法規の定める範囲内において、次の各項目の実現に努めるものとする。
   (1) 学生の交流
   (2) 教員及び研究者の交流
   (3) 共同研究及び共同開発

2. 両者は、この協定の実現のために、十分な協議を行うものとする。

3. この協定に定められた項目の実施に必要な経費は、原則として、その実施に係るものについてはその機関の負担とするものとする。

4. この協定は、調印の日から発効し、5年間有効とする。ただし、両者の合意に基づき、変更又は更新することができる。また、この協定は、両者のいずれか一方が少なくとも6か月前までに書面で意思を通知することを条件として、いかなる時点においても解消できるものとする。

5. この協定書は、日本語及び英語でそれぞれ2部を各自保持して作成し、両者がそれぞれ1部を保有するものとする。

2012年3月5日
国立大学法人愛媛大学教育学部長

齋 卓三

ルイジアナ大学モンロー校 学長

ニック・J・ブルーノ

Kotobuki Takanori
国立大学法人愛媛大学教育学部とルイジアナ大学モンロー校との
学生交流に関する覚書

日本国 国立大学法人愛媛大学教育学部とアメリカ合衆国 ルイジアナ大学モンロー
校との学術交流に関する協定（以下「協定書」という。） 第１項第１号に定める学生の
交流の円滑な実施を図るため、協定書第２項に基づき、以下の事項について同意する。

１．学生交流の種類
学生交流の形式として「教育文化視察」及び「交換留学」の２つを設ける。

２．受入学生の身分
教育文化視察について、国立大学法人愛媛大学においては「短期交流学生」として、
ルイジアナ大学モンロー校においては「訪問学生」として受け入れる。
交換留学について、国立大学法人愛媛大学においては「特別聴講学生又は特別研究
学生」として、ルイジアナ大学モンロー校においては「交換留学生」として受け入れ
る。

３．受入学生数
教育文化視察について、両者は、１年に 10 名程度を限度として学部生あるいは大学
院生を互いに受け入れる。
交換留学について、両者は、１年に 2 名を限度として互いに学生を受け入れる。
また、教育文化視察及び交換留学において、互いに受け入れる人数が互者でなるべ
く等しくなるよう努力する。

４．在学期間
教育文化視察について、受入期間は、原則として２週間程度とする。
交換留学について、受入期間は、原則として１年以内とする。

５．授業料その他の費用
両者は、受入学生の検定料、入学科及び授業料は、相互に不従事とする。

６．単位認定
受入学生の学業成績は、学生の派遣元の大学の規定に従って、派遣元の大学が評価
するものとする。

７．受入学生の住居その他にかかる費用
両者は受入学生が住居を適切な費用で確保できるよう可能な限り努力するものと
する。家賃等住居にかかる費用、交通費、生活費、健康保険及び傷害保険については、
学生が負担するものとする。
Item E.16. University of Louisiana at Monroe’s request for approval of Cooperative Agreements with three international universities in the Republic of Korea.

EXECUTIVE SUMMARY

The University of Louisiana at Monroe requests approval of cooperative agreements with three international universities in the Republic of Korea – Jeonju University, Hankyong National University, and Yeungnam University.

All agreements provide for short-term study abroad and longer-term (one semester or greater) exchange study opportunities for undergraduate and graduate students. In these cases, tuition and fees will be paid at the student’s home institution and travel and related expenses shall be borne by participating students. Collaborative teaching and research opportunities will also be afforded to faculty.

All proposed agreements are valid for five years and become effective on the date signed by both parties. Both parties may terminate the agreement upon written notice given six months prior to the termination date becoming effective.

The proposed Cooperative Agreements appear to be academically sound and appropriate for preparing students for the global economy.

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 approval of Cooperative Endeavor Agreements with three international universities in the Republic of Korea.
Dr. Sandra Woodley  
President  
University of Louisiana System  
1201 North Third Street 7-300  
Baton Rouge, LA 70802

Dear Dr. Woodley:

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

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

Sincerely,

Nick J. Bruno, Ph.D.  
President
AGREEMENT OF ACADEMIC COOPERATION
BETWEEN
JEONJU UNIVERSITY, REPUBLIC OF KOREA
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 Jeonju University (hereinafter “JJU”), Jeonju, Jeonbuk Province, 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, administrative staff 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 JJU 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, JJU 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.

SIGNED BY:

........................................... ...........................................
Ho-in Lee, Ph.D. Nick J. Bruno, Ph.D.
President President
Jeonju University University of Louisiana at Monroe

........................................... ...........................................
DATE DATE
July 21, 2015

Dr. Sandra Woodley  
President  
University of Louisiana System  
1201 North Third Street 7-300  
Baton Rouge, LA 70802  

Dear Dr. Woodley:

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

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

Sincerely,

Nick J. Bruno, Ph.D.  
President
AGREEMENT OF ACADEMIC COOPERATION
BETWEEN
HANKYONG NATIONAL UNIVERSITY, REPUBLIC OF KOREA
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 Hankyong National University (hereinafter “HKNU”), Anseong, Kyonggi Province, 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, administrative staff 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 HKNU 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, HKNU 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.

SIGNED BY:

.................................................. ..................................................
Tae Beomseok, Ph.D. Nick J. Bruno, Ph.D.
President President
Hankyong National University University of Louisiana at Monroe

.................................................. ..................................................
DATE DATE
July 21, 2015

Dr. Sandra Woodley  
President  
University of Louisiana System  
1201 North Third Street 7-300  
Baton Rouge, LA 70802

Dear Dr. Woodley:

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

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

Sincerely,

Nick J. Bruno, Ph.D.  
President
AGREEMENT OF ACADEMIC COOPERATION
BETWEEN
YEUNGNAM UNIVERSITY, REPUBLIC OF KOREA
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 Yeungnam University (hereinafter “YU”), Gyeongsan, Gyeongbuk Province, 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, administrative staff 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 YU 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, YU 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.

SIGNED BY:

..................................................  ..................................................
Seok Kyun Noh, Ph.D.                  Nick J. Bruno, Ph.D.
President                            President
Yeungnam University                  University of Louisiana at Monroe

..................................................  ..................................................
DATE                                  DATE
BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 27, 2015

Item E.17. University of New Orleans’ request for approval of the Joseph Canizaro and James Livingston Center for Environmental Informatics.

EXECUTIVE SUMMARY

University of New Orleans requests approval of the Joseph Canizaro and James Livingston Center for Environmental Informatics (EI). The proposed Center will focus on a broad area of Environmental Informatics which is defined as the research and system development focusing on the environmental sciences relating to the creation, collection, storage, processing, modeling, interpretation, display, and dissemination of data and information.

The establishment of the Center, which is slated to be open upon Board approval, is a result of a donation from Mr. Joseph Canizaro and General James Livingston, who will fund three endowed professorships at UNO’s Computer Science Department. The rationale for the creation of the proposed Center emanates both from societal and organizational needs. The Center will foster both inter-disciplinary collaboration within the University and greatly facilitate close collaborations with non-academic institutions, such as state and federal agencies, and industrial partners. The Center’s main goal is to advance educational research and development efforts in EI, involving faculty, staff, students, and non-academic personnel.

Environmental Informatics is an integrated scientific discipline that emerged in Europe in the early 1990’s, and most EI programs are still found there. The Center will apply environmental numerical modeling, machine learning techniques, and advanced Geospatial Information Systems combined with Semantic Web Services to develop smart environmental decision support systems for the sustainable management of marine fauna, risk mitigation, and environmental monitoring. There are no similar programs in Louisiana or in any of the Gulf Coast states.

Existing resources will be used to manage the Center and it will be sponsored by the Computer Science Department. The Center will have both a Campus Advisory Board and a Technical Advisory Board. The Campus Advisory Board will address issues pertaining to the Center’s administration while the Technical Advisory Board will oversee the research projects of the Center. State funds will not be requested for the operation of the Center. The University anticipates that it will be a contract Research and Development Center funded solely from private, state, and federal grants/contracts. Other funding opportunities are currently being pursued.
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 New Orleans’ request for approval of the Joseph Canizaro and James Livingston Center for Environmental Informatics.
July 29, 2015

Dr. Sandra Woodley
President
University of Louisiana System
1201 Third Street, 7-300
Baton Rouge, LA 70802

Dear Dr. Woodley,

I am requesting approval for the proposed new Joseph Canizaro and James Livingston Center for Environmental Informatics.

Thanks you for your consideration.

Sincerely,

[Signature]

Peter J. Fos
President
University of New Orleans
<table>
<thead>
<tr>
<th>Name of Institution</th>
<th>University of New Orleans</th>
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<tbody>
<tr>
<td>Name of Proposed Unit</td>
<td>Joseph Canizaro and James Livingston Center for Environmental Informatics</td>
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<tr>
<td>Name and Title of Administrator</td>
<td>Mahdi Abdelguerfi, Professor &amp; Chair</td>
</tr>
<tr>
<td>Department or Academic Unit Responsible for the Unit</td>
<td>Computer Science</td>
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<td>Date Approved by Institution's System</td>
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<td>Date to Be Implemented</td>
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PART I: DESCRIPTION

Overview

The Department of Computer Science at the University of New Orleans proposes the establishment of the Joseph Canizaro and James Livingston Gulf States Center for Environmental Informatics. The proposed Center will focus on a broad area of Environmental Informatics (EI). The UK Natural Environment Research Council defines environmental informatics as the "research and system development focusing on the environmental sciences relating to the creation, collection, storage, processing, modeling, interpretation, display and dissemination of data and information." It differs from geomatics, which as its etymology suggests, is the discipline of gathering, storing, processing, and delivering earth-referenced information. Geomatics consists of products and services involved in the collection, integration and management of geographic data, including the tools and techniques of land surveying, remote sensing, cartography, geographic information systems (GIS), global navigation satellite systems, and photogrammetry. In contrast, environmental informatics is an integrator of multiple scientific disciplines for the expressed purpose of serving environmental management needs. Thus conceived, the products of Geomatics are but the point of departure of Environmental Informatics. The center will apply environmental numerical modeling, machine learning techniques and advanced Geospatial Information Systems combined with Semantic Web Services to develop smart environmental decision support systems for the sustainable management of marine fauna, risk mitigation and environmental monitoring. The center will foster both inter-disciplinary collaboration within the university, and will greatly facilitate close collaboration with non-academic institutions, such as state and federal agencies, and industrial partners. The main goal is to advance educational, research and development efforts in EI, involving faculty, staff, students, and non-academic personnel (such as personnel from the Louisiana Department of Wildlife and Fisheries (LDWF), The U.S. Army Corps of Engineers (USACE) – New Orleans District and the Naval Research Laboratory (NRL) at Stennis Space Center in Mississippi) in its endeavors.

The proposed center is a natural progression in a systematic, multi-year effort by the Computer Science and Biology Departments to build a Gulf Coast Wide recognized research and educational program in EI. The main objectives behind it are to:

- **Attract Federal and State research and educational funding.** EI is of critical importance to the nation and to the State of Louisiana and is an area of major interest for many federal funding agencies. In addition to traditional research funding provided by the National Science Foundation, other agencies, such as the Department of Defense, the LDWF and the State’s Department of Natural Resources (DNR) support applied research in specific EI areas of interest.

- **Attract and retain highly qualified students, faculty, and staff.** The center will provide unique opportunities for educational and career development that will make it a natural focal point for efforts to attract talent to the area.

- **Facilitate workforce and economic development.** The center will provide special workforce training opportunities that are critical to the expansion of the local pool of highly qualified IT professionals in EI. This is in sync with the State of Louisiana’s long-term effort to diversify the economy and attract and retain major Tech companies.
• **Develop outreach programs.** The center will serve as the coordination point for community outreach initiatives in the Greater New Orleans area, including educational programs for local high schools. Another aspect will be an outreach effort to increase awareness of the importance of and opportunities in EI among entrepreneurs, particularly small businesses.

• **Promote societal benefits.** EI at UNO has a track record of producing solid software tools and mathematical models for the sustainable management of marine fauna, risk mitigation and environmental monitoring. The center will provide a development environment where, in collaboration with industry and government agencies, research ideas and prototypes are grown into real-world EI models and software tools to be used in daily practice.

The establishment of the Canizaro/Livingston GulfSCEI was made possible by a generous donation from Mr. Joseph Canizaro and General James Livingston that will fund three endowed professorships at UNO’s Computer Science Department, including one for the Director of the proposed Center.

**Research Objectives**

In this section, we briefly sketch some of the research objectives of the proposed Center.

**Research Objective #1: Annotating the Uncertainty of Geospatial and Environmental Data**

Geospatial and environmental data services developed by the Open Geospatial Consortium (OGC) have become widely adopted throughout a number of different communities and have become mandatory for government dissemination of many geospatial and environmental data types. The OGC standards, such as the Web Map Service (WMS), Web Feature Service (WFS), Web Coverage Service (WCS), and Geography Markup Language (GML), are being used by diverse groups of users who must access the data with a variety existing of geospatial clients. Despite the requirements for their use, OGC standards lack defined methods of representing uncertainty. Without uncertainty, geospatial and environmental data cannot be properly used for navigation, analysis, modeling, or visualization. The consequences of using geospatial and environmental data without uncertainty can range from poor weather forecasting to grounding or even wrecking a ship. Our research adds the capability to annotate uncertainty information into the Geographic Markup Language, the standard exchange format for geospatial data.

The data quality of a geospatial dataset is a complex and interrelated set of different parameters. It includes positional accuracy, value accuracy, provenance, consistency, and completeness. Our work was guided by a number of specific requirements for annotating the uncertainties to geospatial data. First, the method for describing uncertainties must support the diversity of methods for representing error distributions, including multiple probability distributions and statistics. Second, it needs to be simple to use and for both data producers and consumers. Last, the method must support wide usage, especially by a variety of Web service clients that cannot be modified specifically to handle the new uncertainty annotations. As such, we cannot modify the existing standards in a way that can break compatibility. Furthermore, we must also attempt to match current common practices that, while not official parts of the standard, will increase usability across a large number of users.

Our primary contribution is describing our method of adding uncertainty annotations to GML in a manner that meets the requirements listed above. GML supports both gridded and vector data products making it a good platform to support a wide variety of data. UncertML is used as the
encoding language for uncertainty in this work because of its comprehensive representations for different types of uncertainty, expressivity in encoding those uncertainties, and general ease of use. This work presents the method by which both gridded and vector products are annotated with uncertainty using GML and UncertML together. Also tackled in this project is an extension to support an uncertainty distribution not natively supported by UncertML as well as examples of implemented Web services incorporating that uncertainty into their data visualizations for end users.

The investigators for the project are Dr. M. Abdelguerfi from UNO's Computer Science Department, Drs. E. Ioup, K. Shaw & J. Sample for the Naval Research Laboratory at Stennis Space Center (NRL-SSC), and doctoral students Mat Toups and Zhang Zhao.

**Research Objective # 2: Integrated Spatio-Temporal Information Systems for the Louisiana Department of Wildlife and Fisheries (LDWF)**

This multi-year project provides to the LDWF a number of integrated Spatio-Temporal Information Systems (STIS) including:

- Telemetry-based fish tagging: This STIS is being designed for the recently initiated acoustic telemetry-tagging project on Lake Pontchartrain. The project will collect real-time data on the movement of individual Speckled Trout and the associated environmental data. The planned STIS will enable the study of seasonal migration patterns of Speckled Trout in Lake Pontchartrain. During the project's second phase and extension, to include more fish species and basins is expected.

- Traditional fish tagging: The tradition fish tagging effort is a voluntary program aimed at a better understanding of the movement patterns and habitat use of targeted fish species. This STIS includes a geospatial portal that enables LDWF to perform data entry, content management and report generation. The portal enables anglers to perform on-line submission and manage their own captures/recaptures. Submission can also be performed via mobile app while the angler is still on the water.

- Louisiana Recreational Creel Survey (LA Creel): This is a state-of-the-art real-time STIS that will enable Red Snapper's quota monitoring to insure a sustainable fishing of this species along the coast of Louisiana.

- Recreational Offshore Landing Permits (ROLP): This public web portal serves as the state's central access point for registering, viewing, and renewing LDWF recreational/charter fishing permits at no cost to the user.

The investigators for the project are Dr. M. Abdelguerfi, Dr. Thomas Soniat of the Department of Biological Sciences, Daniel Ward, Senior Research Software Engineer, Nathan Cooper, Research Software Engineer, graduate research assistants Dustin Peabody, and Devin Frey, and undergraduate students Kristen Maus and Singh Perabjoth.

**Research Objective # 3: Cloud-Based Architecture for Large-Geospatial Data Analytics**

In recent years, the adoption of cloud technologies such as Hadoop MapReduce and HDFS has enabled organizations to analyze extremely large data sets using commodity technology. Current research into adapting these technologies to geospatial data promises to bring this benefit to spatial data applications, provoking the question: how can these systems be implemented for
production applications? To answer this question, research into both cloud geospatial system performance and cloud geospatial system manageability are required.

The manageability question can be stated as such: how can production users deploy cloud geospatial applications in a multitenant system, efficiently sharing resources, while providing the necessary isolation? Multi-tenancy is necessary since it is not always cost effective to dedicate hardware to every project, especially at the scale at which Hadoop based applications are usually used. If a project's workload is bursty, the full capacity of a cluster may be used at some times, while at other times, its CPU and network resources are mostly idle. By hosting multiple applications on the same hardware resources, utilization of hardware investments can be brought up. At the same time, isolation is necessary for both performance and security reasons. From a performance standpoint, no application on a multitenant setup should be allowed to use more than its allocated share of resources, so that it does not adversely affect the performance of other applications on the same system. From a security standpoint, application owners should be able to expect that other tenants have no opportunity for unauthorized access to their data.

Both of these requirements suggest that some sort of virtualization system must be used in between the Hadoop based applications and the hardware they run on. Because of the scale of large Hadoop clusters, this system must be scalable to cloud scale, that is, into multi-rack virtualization software deployments. Because of its open source nature, multi-tenancy management capabilities, and proven ability at cloud scale, OpenStack is promising for this application.

OpenStack is a complex system from a performance standpoint, and research is necessary into how to architect an OpenStack system to host high performance Hadoop based geospatial systems. Among the necessary questions are whether an OpenStack cluster can be architected to provide high performance for HDFS data storage, or whether it is better to rely on OpenStack's built-in object storage for this purpose. HDFS is proven as a high performance data store for large file oriented, write-once, read-many applications, but it is not always suitable for small file workloads. OpenStack object storage may provide a better alternative, and it is also possible that the proper integration of solid state storage may alleviate the problem. Since some current geospatial Hadoop based applications are storing their data in HBase, work is also necessary into optimizing the performance of HBase applications on OpenStack.

Furthermore, research is necessary into the operations side of managing such a cluster. Questions of how resource chargeback to geospatial systems must be addressed, as well as questions of how to securely enable sharing of data of applications only where desired, and how to synchronize data between loosely coupled systems. Also, proper practices for prevention of accidental data loss must be developed.

The investigators for the project are M. Abdelguerfi, John Finigan, IT Director of UNO's Computer Science Department, Dr. E. Ioup (NRL-SSC), and doctoral student Matt Toups.


Research Objective # 4: Algal Genomics for Energy Production and Environmental Restoration
There are two fold major problems associated with our dependency on fossil fuel: first, fossil fuel is finite and, thus, soon to be heavily depleted. Second, environmental pollution is unavoidable, as seen during the BP spill in the Gulf of Mexico.

The above problems motivate us to study algal genomics. Indeed, algae are found to have the potential of providing biofuel at a higher rate compared to any other plants. Unlike fossil fuel, algae have the added advantage of being renewable. Moreover, it should be noted that the petroleum and natural gas we currently use actually originates from ancient algae. Our plan of study involves the following tasks:

- Assess the relationship among different algal species to understand their evolution for adapting the changing environment as well as for production of biofuel such as lipid and H₂. These can be done using generating phylogenetic trees, novel algorithms for prediction and statistics from the datasets available.

- Study a gene-regulatory based pathway analysis of algae, which would enable us to understand the underlying mechanism of optimized carbon sequestration and biofuel production via pathway engineering.

- Predict the key genes which can be ligated to specific promoters and can be turned on for cost-effective biofuel production. A system level view, by reconstructing a genetic network in a genome scale model is crucial in studying the biosynthetic machinery of these algal-cells.

- The project can restore the environment, establishing missing links by completing the renewable biofuel production cycle: carbon sequestration, converting CO₂ to O₂ in greater amount and using CO₂ and sunlight to produce biofuel. The industry generated CO₂ can also be passed into the water for algae to consume.

- This renewable approach will ensure regular supply of adequate biofuel as well as useful byproducts: pharmaceutical, nutraceutical, protein therapeutic, enzymatic.

- We consider Louisiana to be one of the best places in the world for growing algae because of year-long availability of sunlight, and warm eutrophic waters where the algae can grow rapidly by sequestering concentrated CO₂ and abundant inorganic nutrients.

- Further, the algae can treat the municipal wastewater from the sewerage as well as from the Mississippi River by consuming inorganic nutrients (nitrogen and phosphate) and providing cleaner water and air.

- Louisiana is reported to have best environment in US for growing algae, which has a theoretical production of 2.520 billion gallons of oil using an algae strain with 40% oil content. Our proposed scientific approach has the potential to increase the production many times more and can revolutionize Louisiana's economy.

Based on our current bioinformatics research expertise in the area of proteomics, machine learning and artificial intelligence, we ultimately expect to be able to computationally design engineered efficient biofuel-producing algae. The immediate outcome of the research will result in several software tools for genomic pathways analysis, mapping of efficient biofuel production
in algae and assistance in biofuel production technology.

The investigators of the project are Drs. Md Tamjidul Hoque, Christopher Summa and Doctoral research assistants Sumaiya Iqbal and Avdesh Mishra.

**Research Objective # 5: Fisheries Modeling for the Sustainable Management of the Louisiana Public Oyster Grounds**

Although state fisheries agencies routinely conduct stock assessments to determine the abundance of their oyster resource, until now the determination of what constitutes a sustainable harvest of oysters has proved elusive. With the development of a shell-budget based model, we are now able to estimate sustainable harvests for public reefs in Louisiana. This effort builds on funding initiated by Sea Grant, supplemented by NFWF and sustained by LDWF. The objectives are:

- Estimate annual sustainable harvests of oysters from Public Oyster Grounds. An annual stock assessment of public reefs by LDWF provides data on oyster density, oyster size and culch density. These are inputs to a numerical model which grows, kills and fishes oysters. A sustainable harvest is one in which there is no decrease in culch density -- that is, no diminution of the reef itself.
- Train LDWF personnel in sampling techniques, remote data entry and model simulation. A Training Workshop is now held in preparation for the annual stock assessment, with a Stock Assessment Workshop which follows in which sustainable harvest estimates are evaluated.
- Assist LDWF in obtaining certification of the Louisiana oyster industry as sustainably managed. The development and use of the sustainable harvest model has significantly bolstered the state’s effort in demonstrating that the oyster fishery can be sustainably managed. Product certification for sustainability will be increasingly necessary in maintaining product market share.

The investigators for the project are Dr. Thomas Soniat, Dr. M. Abdelguerfi, Nathan Cooper, Research Software Engineer, and undergraduate student Kristen Maus.

**Research Objective # 6: Vessel Monitoring System Informatics for the Louisiana Public Oyster Grounds**

Vessel monitoring systems (VMS) are used by fisheries regulatory organizations to monitor the position, time at a position, and course and speed of commercial fishing vessels. Information derived from VMS, such as catch per unit effort, is used to better manage commercial fisheries. This research builds on a current LDWF-funded project. The objectives are:

- Monitor oyster boat position on Louisiana Public Oyster Grounds. Boat position is determined each minute, which requires management of the very large database generated.
- Determine boat behavior (e.g., travel, fishing, docked) from an analysis of boat speed and direction.
- Maintain and continuously update our GIS representation of the distribution of private oyster leases, public grounds, and public reefs. This is the base map upon which vessel
behavior is overlaid.

- Estimate fishing effort as hours fished per day per vessel.
- Calculate reef area dredged per day per vessel and the percent area of a reef dredged per season.
- Automate the reporting of trip tickets (sacks of oysters harvested per vessel per day) and combine with fishing effort to determine catch per unit effort as sacks/hour.

The investigators for the project are Dr. M. Abdelguerfi, Dr. Thomas Soniat, Nathan Cooper, Research Software Engineer, graduate research assistant Devin Frey, and undergraduate student Kristen Maus.

**Research Objective # 7: Impacts of Freshwater Diversions on Oyster Habitat Suitability**

Plans to divert freshwater from the Mississippi River remain controversial, especially with oyster growers. Freshwater diversions into estuaries push favorable salinities for oysters seaward, potentially beyond existing oyster reefs. Habitat Suitability Index (HSI) models provide evaluations of the impacts of freshwater diversions to oyster habitat and visualizations of optimum areas for oysters if diversions are implemented. The oyster HSI model variables are percent cover of designated area with suitable cultch (hard bottom), mean water salinity, mean salinity during the spawning season and frequency of killing floods. This project builds on initial efforts funded by LDNR (Coastal Master Plan 2012) and USACE. The objectives are:

- Maintain and continuously update our GIS representation of the distribution of private oyster leases, public grounds, and public reefs. This map, with a spatial overlay, provides an estimate percent cover of the bottom with suitable cultch.
- Partner with LDNR, USACE and LPBF to provide HSI visualizations of the impact of freshwater outflow on oyster habitat quality, using salinity data from monitoring stations and hydrographic models to determine mean salinity, mean salinity during the spawning season and frequency of killing floods.

The investigators for the project are Dr. Thomas Soniat, Dr. M. Abdelguerfi, Nathan Cooper, Research Software Engineer, and undergraduate student Kristen Maus.

**Correlation of the Center with the Role, Scope, and Mission of UNO**

The Computer Science Department at UNO is the natural focal point for most computer science academic research in the Greater New Orleans area. The University of New Orleans has chosen Computer Science as one of the programs of excellence, in which the university will invest resources. The proposed Center is viewed as an organizational tool in implementing EI initiatives and will yield direct benefits to the university in terms of further improving the undergraduate and graduate curriculum, advancing research, and providing hands-on experience to our students. Additionally, The Center goals are in line with many goals of UNO’s 2020 Strategic Plan, namely:
• Promote interdisciplinary/cross-disciplinary programs that meet workforce and societal needs, by leveraging UNO expertise and excellence as well as collaborative partnerships with other higher education institutions;
• Foster productive public-private research partnerships by re-establishing the UNO Research and Technology Park mission and utilization plan;
• Promote basic and translational research tied to regional and state economic development efforts as well as federal priorities;
• Increase student participation in research at both the undergraduate and graduate levels.

PART II: NEED

Environmental Informatics as an integrated scientific discipline emerged in Europe in the early 1990’s, and most EI programs are still found there. There are no such programs in Louisiana, or for that matter in any of the US Gulf States. Again, we emphasize the distinction between EI and geomatics. Although some of the products and technologies of geomatics support EI models and software tools, the central goal of EI is the creation of smart systems for environmental management, not merely the visualization of geo-referenced data. As a concrete local example of the separation of EI from geomatics, note that none of the main projects (Virtual Coast Data Archive, Storm Surge Mapping, Water Datum Archive) of the LSU Center for Geomatics (http://c4gnet.lsu.edu) remotely overlap with the projects outlined herein. No other center of this type exists within the State of Louisiana and therefore the creation of the center is essential to satisfy these needs. The basic rationale for the creation of the proposed center emanates both from societal and organizational needs, and these are outlined below

Societal Needs

• Sustainable Environment Management. In lockstep with the rapid transition of our nation to an information-centric society, it is vitally important that we continually invest in developing the appropriate level of human expertise to develop smart environmental decision support systems for the sustainable management of marine fauna, risk mitigation and environmental monitoring.

• Combating natural resources degradation. The State of Louisiana is experiencing a dramatic degradation of its natural resources. EI provides an innovative use of Information Technology (IT) to develop a framework for data analysis, viewing and interpretation. This, in turn, will assist all stakeholders involved in environmental and sustainable development tasks in their decision process. Consequently, for the foreseeable future, EI will be an area of strong growth and this is one of the opportunities for Louisiana to invest in developing world-class expertise.

• Demands for a knowledgeable EI workforce. Both private enterprises and government require a significant number of highly trained IT professionals with Specialization in EI. For example, NRL at Stennis Space Center in Mississippi, the Space and Naval Warfare Systems Command (SPAWAR) in New Orleans, USACE – New Orleans District, SRA International, eVenture, Geocent and Federated Samples routinely hire our graduates.

• Expansion of research, educational, training, and job opportunities. Information
Technology and Environmental Science are recognized by the State of Louisiana as two of the key areas that can help diversify our economic base. Attracting EI investments invariably requires local, highly skilled professionals. The establishment of the proposed center will actively promote this process by both providing educational opportunities for our students, and offering EI training to working professionals.

**Organizational Needs**

As already mentioned, the Computer Science and Biology Departments at UNO have worked purposely and diligently for the last 4-5 years to build a very strong joint EI research program, and has achieved notable success in this endeavor. The proposed is the next logical step in this process that will allow us to:

- **Create an organizational framework for interdisciplinary research.** Many aspects of EI are cross-disciplinary by nature and require collaboration with Federal and Statewide agencies, private forms, and various engineering fields. The Center will facilitate and stimulate this process, as evidenced by similar centers built by other research universities.

- **Stimulate research and development.** The Center will allow participating faculty to pool research funding from various sources to maintain up-to-date research facilities and hire research and support staff.

- **Facilitate partnerships with state and federal agencies and industry partners.** In the area of EI, there is a natural need to form partnerships with industry and collaborations with state and federal agencies, such LDWF, DNR, NRL, and USACE.

- **Support workforce training and development.** The Center will provide a flexible framework that will allow faculty and research staff to provide training, development courses and workshops that do not fit the traditional academic format.

**PART III: FACULTY & STAFF**

The following faculty members, research staff, and collaborators will participate in the new Center.

**Faculty members**

- Dr. Mahdi Abdelguerfi, Professor & Chair, Department of Computer Science
- Dr. Thomas Soniat, Professor/Research, Department of Biology
- Dr. Shengru Tu, Professor, Department of Computer Science
- Dr. Tamjidul Hoque, Assistant Professor, Department of Computer Science
- Dr. Zibran Mohamed, Assistant Professor, Department of Computer Science
- Dr. Christopher Summa, Associate Professor, Department of Computer Science
- Dr. Tumulesh Solanky, Professor & Chair, Department of Mathematics
- Dr. Mathab Lodhi, Associate Professor, Department of Geography
- Dr. Bhaskar Kura, Professor of Civil and Environmental Engineering
• Dr. Mark Kulp, Associate Professor, Department of Earth and Environmental Sciences.
• Dr. Dimitrios Charalampidis, Chair, Electrical Engineering Department.
• Dr. Abdul Rahman Alsamman, Associate Professor, Electrical Engineering Department.

The instructional and research activities of Mahdi Abdelguerfi, Shengru Tu, Zibran Minhas, Christopher Summa, and Tamjidul Hoque will occur primarily within the Center, so their research time commitment is 100%. Thomas Soniat has a full-time research position and commits 50% of his effort to the Center. Other faculty members will participate in the center on a part-time basis, as research projects or instructional needs align with Canizaro/Livingston GulfSCEI objectives. John Finigan will assist with both research and systems administration duties on a part-time basis.

**Research Staff**

• Daniel Ward, Senior Software Research Engineer
• Nathan Cooper, Software Research Engineer
• Charles Crawford, Software Research Engineer
• John Finigan, IT Director

Daniel Ward, Nathan Cooper and Charles Crawford are full-time research staff funded via existing grants/contracts. John Finigan is the Computer Science Department IT Director. He assists the Center with both research and systems administration duties on a part-time basis.

**Research Assistants**

• Matt Toups, Doctoral research assistant
• Zhao Zang, Doctoral research assistant
• Sumaiya Iqbal, Doctoral research assistant
• Avadesh Mishra, Doctoral research assistant
• Dustin Peabody, M.S. research assistant
• Devin Frey, M.S. research assistant
• Kristen Maus, Undergraduate research assistant
• Singh Perabjoth, Undergraduate research assistant
• Christopher Perkins, Undergraduate research assistant
• Brandon Berenato, Undergraduate research assistant

The above research assistants are funded via grants/contracts from LDWF, NRL-SSC and Louisiana’s Board of Regents.

The following people are collaborators. This list will be expanded as new projects are undertaken.

**Collaborators**
- Dr. Elias Ioup, Head of Geospatial Computing Section, Naval Research Laboratory (NRL), Stennis Space Center, MS.
- Dr. John Sample, Geospatial Sciences and Technology Branch Head, Naval Research Laboratory (NRL), Stennis Space Center, MS.
- Dr. Kevin Shaw, Head of Office of Geospatial Science and Technology Innovation, Naval Research Laboratory (NRL), Stennis Space Center, MS.
- Dr. Maik Flanagan, Geospatial Division, Army Corps of Engineers – New Orleans District.
- Mark Schexnayder, Deputy Assistant Secretary, LDWF New Orleans, LA.
- Patrick Banks, Marine Fisheries Biologist, Office of Fisheries, LDWF, Baton Rouge, LA.

PART IV: FACILITIES AND EQUIPMENT

Describe existing facilities (classrooms, laboratories, offices, etc.) available for the proposed unit.

The Computer Science Department’s facilities include a dedicated datacenter and approximately 135 seats in departmental computer labs. The departmental computer labs include software for mobile application development, web application development, and GIS application development. The departmental datacenter houses high performance cluster computing servers, private cloud servers, and support systems for departmental computer labs and offices, such as data backup and file and web services. The datacenter is designed to enable agile provisioning of services as research needs change, and has ample room for expansion.

The Joseph C. Canizaro and James Livingston Center for Environmental Informatics, which operates under the Computer Science Department, is housed in the CERM building, suite 217 at UNO’s Research and Technology (R&T) Park. This prime location, in the heart of UNO’s R&T Park, puts it in close proximity to the Space and Naval Warfare Systems Command (SPAWAR) and its affiliated IT Companies such as SRA International, eVenture and Geocent LLC. It has also facilitated the development of working relationship with state agencies having a presence in the R&T Park, such as the Louisiana Wildlife and Fisheries Department (LDWF). The Center has a staff of three full-time research software, four doctoral research assistants, two M.S. research assistants and several undergraduate researchers. CERM suite 217 provides ample office and lab space for the Center. The space is fully furnished and equipped with high-end computing. No additional facilities beyond these are required.
PART V: ADMINISTRATION

Dr. Mahdi Abdelguerfi, the Director of Center, will report to the Dean of the College of Sciences (Dr. Steve Johnson) who will consult with the Campus Advisory Board on issues pertaining to the administration of the Center. Although the Center is sponsored by the Computer Science Department, it has a multi-disciplinary research mission, which is reflected by the composition of its Campus Advisory Board. The Campus Advisory Board consists of the Provost and Vice President of Academic and Student Affairs (Dr. John W. Nicklow), the Dean of the College of Sciences (Dr. Steve Johnson), the Director of Intellectual Property Management and Commercialization (James Endler), and the Chairman of the Computer Science (Dr. Mahdi Abdelguerfi).

A Technical Advisory Board will oversee the research projects of the Center. This board will advise the Center on research directions to ensure that as projects are initially developed, their scope and significance is in line with the Center’s goals. The Technical Advisory Board will conduct a yearly review of the operation and performance of the Center, and make recommendations to the Center’s Director on new research initiatives and personnel addition and assignment. The initial Technical Advisory Board consists of:

- Mike DeBoer, Chief Information Officer, GE Capital Center, New Orleans
- Ray Bellant, CEO of eVenture LLC, New Orleans
- Dr. Bobby Savoie, CEO of Geocent, New Orleans
- Jeff Mosley, SPAWAR Systems Center Atlantic
- Randy Pausina, Assistant Secretary LDWF, Baton Rouge
- Brian Gannon, Chief, Geospatial Engineering, USACE – New Orleans District

The composition of the Technical Advisory Board is expected to grow with the addition of new sponsored research projects.
PART VI: BUDGET PLAN

State funds are not requested for the operation of the planned Center. The Center is expected to be a contract R&D Center funded solely from private, State and Federal grants/contracts. LDWF, the Louisiana Board of Regents, and the Naval Research Laboratory at Stennis Space Center - Mississippi currently fund the Center. A list of grants/contracts in force during the 2010-2015 fiscal years by some of the faculty affiliated with the Center is provided in budget form. Other funding opportunities are currently being actively pursued.

UNO has an established policy of returning 25% of recovered indirect costs to Centers approved by the Board of Regents (IMD85.002, “Distribution of Recovered Indirect Cost to Colleges/Libraries/Centers/Institutes”). Based on the above policy and the Center’s recent funding level, a very conservative indirect costs return to the Center will be about $15,000/year. An estimated budget of the Center over the next five years is provided in Budget Form. The bulk of the funding is already guaranteed for items such as current faculty salaries, System Administrator, fringe benefits, supplies, and travel.
BOARD OF SUPERVISORS FOR THE
UNIVERSITY OF LOUISIANA SYSTEM

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

August 27, 2015

Item E.18. University of Louisiana System’s request for approval of System Universities’ 2015-16 Promotions in Faculty Rank and Recommendations for Tenure.

EXECUTIVE SUMMARY

Annually each UL System campus submits its recommendations for promotions in faculty rank and tenure. This year, 79 faculty members were recommended for promotion in rank, while 54 faculty members were recommended for tenure.

With respect to promotion in rank, 30 faculty members across the UL System were recommended for promotion to the rank of Professor and 49 to the rank of Associate Professor. Our review suggests that the recommended faculty met all respective guidelines.

A total of 54 faculty members across the System were recommended for tenure, and rationale was provided for six to whom “early” tenure is recommended (i.e., before the six-year probationary term). In these cases, exceptions were considered on the basis of outstanding performance and/or early tenure review was a condition of acceptance of employment. Board policy provides for such exceptions.

RECOMMENDATION

It is recommended that the following resolution be adopted:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors for the University of Louisiana System hereby approves System Universities’ 2015-16 Promotions in Faculty Rank and Recommendations for Tenure.
## UNIVERSITY OF LOUISIANA SYSTEM

### Promotions and Tenure

#### 2015-2016

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**UL System Totals**: 49 30 54