REPORT TO THE
LOUISIANA BOARD OF REGENTS

REVIEW OF THE POST-KATRINA SUPPORT FUND INITIATIVE (P-KSFI) PRIMARILY EDUCATION SUBPROGRAM (PES)

Report of the Statewide Panel

May 7-8, 2007

Prepared by:

George Watson (Chair)
Senior Associate Dean
Natural Sciences and Mathematics
University of Delaware

Glenda Hill Gentile
Director
Office of Undergraduate Research
University of Arizona

David Van Wylen
Associate Dean
Natural Sciences and Mathematics
St. Olaf College

REPORT OF THE STATEWIDE PANEL

BOARD OF REGENTS SUPPORT FUND
POST-KATRINA SUPPORT FUND INITIATIVE (P-KSFI)
PRIMARILY EDUCATION SUBPROGRAM (PES)
FY 2006-07

INTRODUCTION

The Primarily Education Subprogram (PES) statewide review panel lauds the Board of Regents for its wisdom in establishing the Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram, to provide high-level support for scientific reform initiatives with the potential for contributing substantially to Louisiana's economic and community development. Both the proposal submissions and the interview sessions held with the panel were of high quality, and demonstrate the commitment of Louisiana's post-secondary institutions to bolstering undergraduate education in science, technology, engineering and mathematics (STEM) disciplines.

BACKGROUND INFORMATION

Nine (9) proposals were submitted to the PES for multi-year funding consideration beginning in FY 2006-07. Proposals were solicited from primarily undergraduate two- and four-year institutions for projects seeking to elevate the quality of undergraduate science learning, particularly through creating introductory learning opportunities for students with diverse educational backgrounds, experiences, aspirations and learning styles.

THE REVIEW PROCESS

The PES statewide review panel, whose experience and expertise span the eligible disciplines as well as undergraduate STEM education reform, convened in Baton Rouge during May 7-8, 2007. This panel interviewed representatives of the proposals submitted to the PES in individual forty-five minute sessions on May 7, then discussed the merits and ranked all proposals. Ultimately, the panel developed final funding recommendations for the Board of Regents which are contained in this report.

The five criteria as published in the RFP, used by the panel in making its funding recommendations, are as follows: (1) plans for the improvement of undergraduate science education, (2) broad impact/workforce development potential, (3) institutional leveraging, (4) sustainability and scalability, and (5) assessment. The panel also considered the appropriateness of the budget requests in making final funding recommendations.

The panel was informed that a total of $5 million, plus $600,000 in Enhancement for Severely Impacted Programs (ESIP) funds, were available to support P-KSFI PES projects over a maximum of five (5) years. Utilizing the criteria described previously, the panel recommended funding for seven (7) proposals judged worthy of support and rated them Priority I. See **Table I**.

Table II lists the two (2) proposals not recommended for funding.

Appendix A summarizes all proposals submitted for funding consideration to the P-KSFI PES competition and provides the following information for each proposal: number, title, institution, principal investigator, and funds requested.

GENERAL PANEL RECOMMENDATION

The panel strongly recommends that the Board of Regents, using out-of-state consultants, conduct a comprehensive mid-course review of all funded projects. This review should measure progress based on recommendations in the report and benchmarks identified by the principal investigators of each funded project. It is appropriate that continued funding for all projects be contingent on the outcomes of these reviews.

TABLE I

HIGHLY RECOMMENDED FOR FUNDING (PRIORITY I) (7)

Rank	Proposal #	Institution	Principal Investigator	Total Amount Requested	Total Amount Recommended
1	002	LSU-S	Nathan Hutchings	$406,075	$406,075
2	009	Xavier	Shubha Ireland	$1,487,785	$1,047,125
3	008	SLU	David Norwood	$496,408	$425,000
4	001	Delgado CC	Warren Duclos	$1,278,422	$965,000
5	005	Nicholls	Raj Boopathy	$623,150	$500,000
6	003	Loyola	Frank Jordan	$1,329,902	$625,000
7	004	McNeese	Luther Stevenson	$163,010	$163,010
TOTAL				**$5,784,752**	**$4,131,210**

TABLE II

NOT RECOMMENDED FOR FUNDING (2)

Proposal #	Institution	Principal Investigator	Total Amount Requested
006	Nunez CC	Stephen Waddell	$1,924,550
007	OLHC	Patricia Prechter	$2,128,991

***Note*:** These proposals are listed by proposal number, not in order of merit.

Rank: 1

Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram (PES)
Criteria for Review

Proposal Number	**002PKSFI-E-07 (Biological Sciences)**
Proposal Title	**Shreveport/Bossier SciNet: Using Information Technology Resources to Develop Interdisciplinary Life Science Education Enhancements in Freshman/Sophomore Life Science and High School Curricula**
Submitting Institution/PI	**LSU-Shreveport/Nathan Hutchings**
Total Amount Requested	**$406,075**

1. Focus on the Improvement of Undergraduate Science Education (40%): SCORE: 38

- Degree to which proposed activities target gaps and opportunities in the early post-secondary STEM pipeline
- Ability of proposed activities to attract and retain students in STEM disciplines
- Expertise of the faculty to implement proposed activities and achieve significant change
- Strength and significance of proposed work

Comments:

- A significant strength of this proposal is the plan to develop the curriculum throughout the undergraduate and high school pipeline.
- This project is an excellent way to excite and improve learning for high school students.
- This comprehensive proposal was developed by a strong leadership team with a well articulated vision.
- The team presented a well-organized plan of action, which provided the panel with relevant supplementary insights.

2. Broad Impact/Workforce Development (25%): SCORE: 20

- Potential impact of the project on educational quality and accessibility in the participating institution(s)
- Potential for project impact on local and regional economic development
- Potential impact of the project in the community
- Relationship of activities to development of skills needed in the local and regional workforce
- Potential to advance students to higher, marketable skill levels in science and technology
- Potential to advance job creation and training opportunities

Comments:

- The project is designed to impact the entire secondary education community in Bossier/Caddo and is likely to succeed because of the involvement of the high school coordinator in its development and implementation is a significant strength.
- There is the potential for best practices to be disseminated to other settings through project modules.
- Plans are in place to inform secondary high school teachers of the opportunities provided through the program.
- The project is led by faculty in the sciences.
- The secondary impact on workforce development directly relates to expanding the number and elevating the quality of scientific personnel in the pipeline.
- The project should better prepare students for college and/or the workforce.

3. Institutional Leveraging (10%): SCORE: 8

Degree to which participating institution(s) provides the necessary tangible support for project activities

- ❖ Willingness of the institution(s) to provide non-cash matching or other resources to ensure the success of the project
- ❖ Degree to which project activities and focus reflect institutional priorities
- ❖ Non-institutional support garnered for the project or related to project activities

Comments:

- Meaningful matching funds and other forms of support from LSU-Shreveport and the secondary education district are documented in the proposal.
- The budget is well articulated, detailed and modest, given the projected impacts of the program.
- Prospects for collaboration with the Bossier/Caddo school systems are positive.

4. Sustainability and Scalability (15%): SCORE: 12

- ❖ Institutional and partnership commitments to sustaining project activities beyond BoR funding
- ❖ Alignment of activities with a realistic and clearly delineated time frame for development and implementation
- ❖ Achievable plans for sustaining activities and scaling them into broader segments of the institution's teaching and learning base
- ❖ Plans for sharing results and outcomes, and building "best practices" models
- ❖ Direction of project activities toward long-term development and stability

Comments:

- The project seeks to establish connections that should continue beyond the funding period and capitalize on opportunities that may be leveraged with PES support.
- The team is working to build a culture that will sustain itself beyond the life of the proposed project.
- The new website will be an excellent vehicle for dissemination.
- Transfer of best practices from the project to other institutions and locations is likely.

5. Assessment (10%): SCORE: 7

- ❖ Identification of measurable outcomes related directly to project activities
- ❖ Degree to which the management team is qualified to assess project activities
- ❖ Plans to invite external consultants and/or experts to assess project activities and measure success

Comments:

- The assessment plans are well designed, particularly at the undergraduate level.
- Assessment plans should include analysis, using baseline data, of whether and how the project impacts participating high school students. In particular, the PIs should collect data relating to improvements in students' preparedness for college.
- It is an appropriate strategy to engage external consultants for web design.

TOTAL SCORE: 85

BASES OF RATING

This is a comprehensive, interactive plan for curriculum development, high school teacher workshops, and research experiences that is likely to measurably improve student preparedness at multiple levels in the STEM pipeline, from high school through undergraduate education. It is led by a dynamic and committed team, and includes an effective collaboration between LSU-S and regional high schools.

The panel recommends full funding at the level of $406,075, with annual allocations as proposed.

Rank: 2

Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram (PES)
Criteria for Review

Proposal Number	**009PKSFI-E-07 (Biological Sciences)**
Proposal Title	**PKSFI/Xavier Biothrust 21: Rebounding from Katrina and Achieving New Heights in Educating a 21st Century Biosciences Workforce**
Submitting Institution/PI	**Xavier University/Shubha Ireland**
Total Amount Requested	**$1,487,785**

1. Focus on the Improvement of Undergraduate Science Education (40%): SCORE: 36

- ❖ Degree to which proposed activities target gaps and opportunities in the early post-secondary STEM pipeline
- ❖ Ability of proposed activities to attract and retain students in STEM disciplines
- ❖ Expertise of the faculty to implement proposed activities and achieve significant change
- ❖ Strength and significance of proposed work

Comments:

- Xavier has demonstrated historic strengths in preparing African-Americans for scientific professions.
- This project addresses the large failure rate of students in introductory biology related to a range of factors, including an influx of less well-prepared students and the severe stress of the entire university community caused by Hurricane Katrina.
- Xavier identifies a problem and addresses it in a well-defined, comprehensive way.
- There is a strong focus on updating general biology courses in accordance with the nationally recognized BIO 2010.
- The team provides a detailed implementation plan.
- The panel is concerned with the possibility of curricular redesign resulting in an overload of content in the redesigned courses.
- Care should be taken in identifying modules for curriculum revision based on materials that are already available.
- The project team is well qualified and dedicated.
- The team shows an innovative approach to incorporating web-based technology such as web-lab notebooks for student interaction.

2. Broad Impact/Workforce Development (25%): SCORE: 19

- ❖ Potential impact of the project on educational quality and accessibility in the participating institution(s)
- ❖ Potential for project impact on local and regional economic development
- ❖ Potential impact of the project in the community
- ❖ Relationship of activities to development of skills needed in the local and regional workforce
- ❖ Potential to advance students to higher, marketable skill levels in science and technology
- ❖ Potential to advance job creation and training opportunities

Comments:

- Xavier has a long tradition of success in educating science graduates. This project's role in continuing that tradition will yield broad impact in the region.
- The project has the potential to elevate marketable skill levels in science and technology, leading to long-term impact on the workforce.
- This proposal addresses the problems of weak skills of entry-level students and provides a foundation for more advanced students to achieve at much higher levels.
- The team is proposing to work with Greater New Orleans, Inc. to provide funding for student internships.
- Xavier plans not only to improve the curriculum, but also to hire a coordinator for tutoring and mentoring.

3. Institutional Leveraging (10%): SCORE: 6

- ❖ Degree to which participating institution(s) provides the necessary tangible support for project activities
- ❖ Willingness of the institution(s) to provide non-cash matching or other resources to ensure the success of the project
- ❖ Degree to which project activities and focus reflect institutional priorities
- ❖ Non-institutional support garnered for the project or related to project activities

Comments:

- The project is largely salary driven; in particular, the requests for summer salaries and support staff are very high and poorly justified.
- There does not appear to be need for both a coordinator and an assistant coordinator.

4. Sustainability and Scalability (15%): SCORE: 11

- ❖ Institutional and partnership commitments to sustaining project activities beyond BoR funding

- ❖ Alignment of activities with a realistic and clearly delineated time frame for development and implementation
- ❖ Achievable plans for sustaining activities and scaling them into broader segments of the institution's teaching and learning base
- ❖ Plans for sharing results and outcomes, and building "best practices" models
- ❖ Direction of project activities toward long-term development and stability

Comments:

- There is collaboration across affected departments as well as support for upper administration and student services.
- A culture of improvement and change already exists on the campus.
- The proposed dissemination of outcomes would broaden the impact of the project.
- After the curriculum revision is complete, the need for additional funding will be greatly diminished.
- The reforms proposed are inherently sustainable.
- There is a broad-based willingness to upgrade the curriculum despite the extreme duress under which the institution is operating.

5. Assessment (10%): SCORE: 9

- ❖ Identification of measurable outcomes related directly to project activities
- ❖ Degree to which the management team is qualified to assess project activities
- ❖ Plans to invite external consultants and/or experts to assess project activities and measure success

Comments:

- The formative and summative evaluation plans are strong.
- Flexibility is built into the assessment plan to address unforeseen issues that might arise during project implementation.
- The explicit evaluation provided by the faculty member from the Psychology Department during the interview session was impressive.

TOTAL SCORE: 81

BASES OF RATING

This is a comprehensive project that addresses the problem of sizable failure rates of students in introductory biology courses through laboratory and curriculum revision, tutoring and mentoring, and internships. The remarkable dedication of the faculty to maintaining traditional levels of success under the difficult circumstances of post-Katrina operation is admirable and the proposed project is well designed to meet the objectives and needs of the institution.

The panel recommends funding at the full level of $272,125 for the first year, including $150,000 in ESIP funds, but also recommends reducing the award to $250,000 for years 2 and 3, $150,000 for year 4, and $125,000 for year 5. In each year, reductions should be made in requests for summer salaries and funding for support staff. The pledged level of institutional matching must be maintained in full throughout the project's duration.

Rank: 3

Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram (PES)
Criteria for Review

Proposal Number	**008PKSFI-E-07 (Materials Science)**
Proposal Title	**Leveraging Louisiana's Industrial and Human Resources for Post-Katrina Recovery**
Submitting Institution/PI	**Southeastern LA University/David Norwood**
Total Amount Requested	**$496,408**

1. Focus on the Improvement of Undergraduate Science Education (40%): SCORE: 33

- ❖ Degree to which proposed activities target gaps and opportunities in the early post-secondary STEM pipeline
- ❖ Ability of proposed activities to attract and retain students in STEM disciplines
- ❖ Expertise of the faculty to implement proposed activities and achieve significant change
- ❖ Strength and significance of proposed work

Comments:

- The Student Entrepreneurs as Active Leaders (SEAL) program is modeled after a successful program at Virginia Commonwealth University.
- The benefits of scientific training for students in researching real-world problems are clear, but the role of entrepreneurship and leadership training in student development is not well developed.
- Interaction of students and science faculty with faculty in business should be more cogently defined.
- This program focuses on research experiences for students early in their educational careers; however, this focus would be more effective for upper-level students.
- There must be intense faculty interaction with the entering students to accomplish meaningful results.
- There is a strong leadership team with industry connections, though success may well be inconsistent and occur only on a project-by-project basis.

2. Broad Impact/Workforce Development (25%): SCORE: 22

- ❖ Potential impact of the project on educational quality and accessibility in the participating institution(s)
- ❖ Potential for project impact on local and regional economic development
- ❖ Potential impact of the project in the community

- ❖ Relationship of activities to development of skills needed in the local and regional workforce
- ❖ Potential to advance students to higher, marketable skill levels in science and technology
- ❖ Potential to advance job creation and training opportunities

Comments:

- The interaction with local industry should yield positive outcomes for individual students; it is less clear what systemic improvements can be achieved through the program.
- The number of individual students to be involved in the program is necessarily somewhat limited, which raises concerns about the range of educational impact.
- The workforce development component is a strength of the program and is bolstered by the interdisciplinary focus on science and business.
- This proposal will positively impact local industry and community-based businesses.

3. Institutional Leveraging (10%): SCORE: 8

- ❖ Degree to which participating institution(s) provides the necessary tangible support for project activities
- ❖ Willingness of the institution(s) to provide non-cash matching or other resources to ensure the success of the project
- ❖ Degree to which project activities and focus reflect institutional priorities
- ❖ Non-institutional support garnered for the project or related to project activities

Comments:

- The university provides significant support for this program through the commitment of faculty time.
- The panel is concerned by the lack of contribution from industrial partners.
- Questions regarding intellectual property control/benefit to the university are significant and should be addressed prior to project implementation.
- The budget does not provide sufficient resources for faculty development.
- The panel is concerned regarding the high level of student pay rates through the grant.

4. Sustainability and Scalability (15%): SCORE: 11

- ❖ Institutional and partnership commitments to sustaining project activities beyond BoR funding
- ❖ Alignment of activities with a realistic and clearly delineated time frame for development and implementation

- ❖ Achievable plans for sustaining activities and scaling them into broader segments of the institution's teaching and learning base
- ❖ Plans for sharing results and outcomes, and building "best practices" models
- ❖ Direction of project activities toward long-term development and stability

Comments:
- Special efforts should be made to guarantee a steady supply of problems from business and industry that are appropriate for student investigation.
- Sustainability and the success of the initial activities depend on the inclination of local industry to engage, financially support, and nourish this project.
- Legal and proprietary issues must be addressed before long-term success can be determined.

5. Assessment (10%): SCORE: 4

- ❖ Identification of measurable outcomes related directly to project activities
- ❖ Degree to which the management team is qualified to assess project activities
- ❖ Plans to invite external consultants and/or experts to assess project activities and measure success

Comments:
- The panel recommends that investigators include measures of student learning in the assessment plan; in the proposed plan, assessment is based on participation rather than outcomes.
- The investigators should identify more effective measures of the impact on students of entrepreneurship and leadership instruction.

TOTAL SCORE: 78

BASES OF RATING

This proposal is led by a strong interdisciplinary team of research-active faculty who will develop industrial collaborations and involve science majors in solving real-world problems. The program leadership is particularly strong, which indicates that success is likely, though the panel has some concerns regarding the reliance on as-yet unidentified industrial partners and the inclusion of very inexperienced undergraduate students. The panel recommends funding for the first year at the level of $50,000; $75,000 for year 2; and $100,000 per year for the remaining three years. The pledged level of institutional match is a positive element of the proposal and should be maintained in full.

Rank: 4

Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram (PES)
Criteria for Review

Proposal Number	**001PKSFI-E-07 (Information Technology)**
Proposal Title	**Revised and New Curricula to Meet Post-Katrina Employment Development Needs of the Region**
Submitting Institution/PI	**Delgado Community College/Warren Duclos**
Total Amount Requested	**$1,278,422**

1. Focus on the Improvement of Undergraduate Science Education (40%): SCORE: 29

- Degree to which proposed activities target gaps and opportunities in the early post-secondary STEM pipeline
- Ability of proposed activities to attract and retain students in STEM disciplines
- Expertise of the faculty to implement proposed activities and achieve significant change
- Strength and significance of proposed work

Comments:

- The proposal focuses on the collaborative development of an IT curriculum to address needs of the local business community.
- Curriculum alignment will aid in the student transition from Delgado, a two-year institution, to Southeastern's four-year degree program.
- The institutions plan to share the use of requested equipment, some of which addresses ABET concerns raised in Southeastern's accreditation review.
- Developing a current curriculum in computer information technology will attract more students, though it is difficult to predict the level of interest.
- This project is a very positive addition for Delgado students; Southeastern benefits principally by upgraded server capacity and an increased pool of potential applicants.
- The lack of a 2+2 articulation agreement is a weakness, and the panel is likewise concerned with the lack of a previous track record of Delgado students moving to Southeastern for their baccalaureate degrees.

2. Broad Impact/Workforce Development (25%): SCORE: 22

- Potential impact of the project on educational quality and accessibility in the participating institution(s)
- Potential for project impact on local and regional economic development
- Potential impact of the project in the community

- ❖ Relationship of activities to development of skills needed in the local and regional workforce
- ❖ Potential to advance students to higher, marketable skill levels in science and technology
- ❖ Potential to advance job creation and training opportunities

Comments:

- The team proposes to work with a group of external advisors from the business community to target needs.
- This project meets needs created by the closure of regional academic IT programs in the wake of Hurricane Katrina.
- For students pursuing a terminal two-year degree, the program will provide strong technical skills development.
- The project seeks to build a connection between Delgado and Southeastern for easy student transition; however, it is difficult to predict how many students will take advantage of the opportunity afforded by articulation.
- This is an important area for community colleges to develop curricula related to workforce development.

3. Institutional Leveraging (10%): SCORE: 6

- ❖ Degree to which participating institution(s) provides the necessary tangible support for project activities
- ❖ Willingness of the institution(s) to provide non-cash matching or other resources to ensure the success of the project
- ❖ Degree to which project activities and focus reflect institutional priorities
- ❖ Non-institutional support garnered for the project or related to project activities

Comments:

Delgado will absorb the expense of the additional faculty positions in the third and fourth years of the project, which demonstrates significant institutional commitment.

4. Sustainability and Scalability (15%): SCORE: 9

- ❖ Institutional and partnership commitments to sustaining project activities beyond BoR funding
- ❖ Alignment of activities with a realistic and clearly delineated time frame for development and implementation
- ❖ Achievable plans for sustaining activities and scaling them into broader segments of the institution's teaching and learning base
- ❖ Plans for sharing results and outcomes, and building "best practices" models
- ❖ Direction of project activities toward long-term development and stability

Comments:

- The proposal is not scalable except as a framework for other articulation agreements; the development of a formal articulation agreement between Delgado and Southeastern would enhance sustainability.
- The extent to which students transfer from Delgado to Southeastern lies at the heart of the program's success.
- The proposal did not indicate whether Southeastern will provide any maintenance and upgrade costs for new equipment purchased through the program. Provision of these costs is essential for success.

5. Assessment (10%): SCORE: 4

- ❖ Identification of measurable outcomes directly related to project activities
- ❖ Degree to which the management team is qualified to assess project activities
- ❖ Plans to invite external consultants and/or experts to assess project activities and measure success

Comments:

- The proposal presents no plan to assess student learning; its success is measured primarily by whether the curricula have changed and equipment has been upgraded. More substantive formative and summative evaluation plans must be developed.
- The use of an advisory board is an effective tool in the development of the program.

TOTAL SCORE: 70

BASES OF RATING

This proposal institutionalizes the collaboration of Delgado and Southeastern to address the IT needs of the regional business community. With the establishment of new curricula and the equipment to support them, the programs in computer information technology at both institutions will be strengthened.

The panel recommends funding Delgado at the level of $235,000 for the first year, with $135,000 coming from ESIP funding. In year 2, the panel recommends that Delgado be funded at the level of $100,000. Further, the panel recommends funding Southeastern at the level of $65,000 per year for the first two years for equipping and initiating the Network Systems Administration Laboratory (NetSal). In years 3 and 4, the panel recommends that Delgado and Southeastern be funded at the combined level of $250,000.

The panel recommends that the Board of Regents conduct an external review at the end of year 1 to ensure that an articulation agreement has been secured. The release of additional funds should be contingent on the presence of this agreement after year 1. At the end of year 2, the panel recommends a review of the number of students planning to take advantage of the articulated degree to gauge the projected demand for a mentoring program to be funded beginning in year 3. Funding for Southeastern in years 3 and beyond should be contingent on the successful transition of students from Delgado to Southeastern. At the time of contract negotiations, the revised budget should indicate the division of years 3 and 4 funding between Delgado and Southeastern.

Rank: 5

Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram (PES)
Criteria for Review

Proposal Number	**005PKSFI-E-07 (Biological Sciences)**
Proposal Title	**Laboratory Education Experiences for Freshman and Sophomore Level Undergraduate Students in Biological Sciences**
Submitting Institution/PI	**Nicholls State University/Raj Boopathy**
Total Amount Requested	**$623,150**

1. Focus on the Improvement of Undergraduate Science Education (40%): SCORE: 32

- Degree to which proposed activities target gaps and opportunities in the early post-secondary STEM pipeline
- Ability of proposed activities to attract and retain students in STEM disciplines
- Expertise of the faculty to implement proposed activities and achieve significant change
- Strength and significance of proposed work

Comments:

- This project is designed to ensure student access and success in biology by bolstering the performance of C-grade students through a two-pronged plan to reform the laboratory experience and establish a mentoring program.
- There is a strong group of faculty leading the project.
- The project is ambitious, with plans to fund 15 undergraduate research experiences per academic year, but lacks an extended summer program which could greatly increase student progress.
- There is concern that the program will not be implemented until the second semester of the freshman year, though many students are lost earlier in their college careers.
- The student recruitment and selection processes are not clear.
- The proposal does not address curricular reforms as a partial solution for the high drop-out rate, though this element could be critical in gaining success in retaining and advancing the performance of underachieving students.

2. Broad Impact/Workforce Development (25%): SCORE: 14

- Potential impact of the project on educational quality and accessibility in the participating institution(s)

- Potential for project impact on local and regional economic development
- Potential impact of the project in the community
- Relationship of activities to development of skills needed in the local and regional workforce
- Potential to advance students to higher, marketable skill levels in science and technology
- Potential to advance job creation and training opportunities

Comment:
The relationship of project activities to workforce development is indirect, but crucial. Participation in hands-on research yields more scientifically prepared and employable graduates.

3. Institutional Leveraging (10%): SCORE: 7

- Degree to which participating institution(s) provides the necessary tangible support for project activities
- Willingness of the institution(s) to provide non-cash matching or other resources to ensure the success of the project
- Degree to which project activities and focus reflect institutional priorities
- Non-institutional support garnered for the project or related to project activities

Comments:
- Time pledged by faculty to mentor undergraduate researchers in their laboratories demonstrates their strong commitment to the project.
- The pledge of release time for the PI and Co-PI indicates significant institutional support.

4. Sustainability and Scalability (15%): SCORE: 10

- Institutional and partnership commitments to sustaining project activities beyond BoR funding
- Alignment of activities with a realistic and clearly delineated time frame for development and implementation
- Achievable plans for sustaining activities and scaling them into broader segments of the institution's teaching and learning base
- Plans for sharing results and outcomes, and building "best practices" models
- Direction of project activities toward long-term development and stability

Comments:
- The support of a reflective, engaged, and committed department chair is a positive element of the proposal and critical to its success.
- The team has plans to seek external funds from other sources to continue the project.

5. Assessment (10%): SCORE: 6

- ❖ Identification of measurable outcomes related directly to project activities
- ❖ Degree to which the management team is qualified to assess project activities
- ❖ Plans to invite external consultants and/or experts to assess project activities and measure success

Comments:
- The inclusion of an external evaluation mechanism is excellent.
- The panel recommends the addition of an end-of-session symposium to evaluate the undergraduate research experiences of student and faculty participants.

TOTAL SCORE: 69

BASES OF RATING

The emphasis of this project is on providing an undergraduate research experience that is bolstered by broad faculty participation with strong administrative support and a committed leadership team, including an eager cohort of junior faculty participants.

The panel recommends funding at a level of $100,000 per year for five years. Because the undergraduate research program operates only during the academic year, faculty salary support for summer work does not seem warranted and should be eliminated. Institutional support is strong and should be maintained in full.

Rank: 6

Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram (PES)
Criteria for Review

Proposal Number	**003PKSFI-E-07 (Biological Sciences)**
Proposal Title	**An Interdisciplinary and Experimental Approach to Strengthen Recruitment, Retention, and Training in Biological and Materials Sciences in Post-Katrina New Orleans**
Submitting Institution/PI	**Loyola University/Frank Jordan**
Total Amount Requested	**$1,329,902**

1. Focus on the Improvement of Undergraduate Science Education (40%): SCORE: 28

- Degree to which proposed activities target gaps and opportunities in the early post-secondary STEM pipeline
- Ability of proposed activities to attract and retain students in STEM disciplines
- Expertise of the faculty to implement proposed activities and achieve significant change
- Strength and significance of proposed work

Comments:

- The proposal uses an interdisciplinary approach to target STEM pipeline gaps in student transition from high school to post-secondary education by improving the mentoring culture and incorporating more experiential learning.
- The proposal identifies excellent overall goals but lacks details relating to plans for curricular reform; the proposal would have been strengthened by including more research on existing curricula and ideas for redesign at Loyola.
- The panel is concerned about the feasibility of managing a program of this size. The six summer research teams are large and diverse, including undergraduate students, high school teachers, and four high school students per team.
- A summer program of six weeks appears too short to develop the necessary skills and knowledge of undergraduate researchers.
- The panel is concerned about the possible difficulty of motivating faculty beyond those already involved to participate in such an intensive activity.
- The proposed mathematics skills summer course is a compelling idea, though its effectiveness is difficult to judge since no details of the course content are provided.

2. Broad Impact/Workforce Development (25%): SCORE: 19

- ❖ Potential impact of the project on educational quality and accessibility in the participating institution(s)
- ❖ Potential for project impact on local and regional economic development
- ❖ Potential impact of the project in the community
- ❖ Relationship of activities to development of skills needed in the local and regional workforce
- ❖ Potential to advance students to higher, marketable skill levels in science and technology
- ❖ Potential to advance job creation and training opportunities

Comments:

- The project will likely be successful in attracting more high school students to STEM majors and careers.
- The program will increase and expand students' skill levels, which are critical to the overall success of undergraduate education and workforce development.

3. Institutional Leveraging (10%): SCORE: 6

- ❖ Degree to which participating institution(s) provides the necessary tangible support for project activities
- ❖ Willingness of the institution(s) to provide non-cash matching or other resources to ensure the success of the project
- ❖ Degree to which project activities and focus reflect institutional priorities
- ❖ Non-institutional support garnered for the project or related to project activities

Comment:

The panel is concerned that the only budget item that directly supports curricular reform is the equipment request; in addition, there is no justification for the specific pieces of equipment to be acquired. Use of requested equipment in the proposed project is difficult to ascertain.

4. Sustainability and Scalability (15%): SCORE: 9

- ❖ Institutional and partnership commitments to sustaining project activities beyond BoR funding
- ❖ Alignment of activities with a realistic and clearly delineated time frame for development and implementation
- ❖ Achievable plans for sustaining activities and scaling them into broader segments of the institution's teaching and learning base
- ❖ Plans for sharing results and outcomes, and building "best practices" models
- ❖ Direction of project activities toward long-term development and stability

Comments:

- The project has the potential to become self-sustaining if strong faculty support is attained. Committed faculty members will seek external grants to continue student stipends.
- If it is completed and proves successful, curricular reform should be sustainable over the long term.

5. Assessment (10%): SCORE: 5

- ❖ Identification of measurable outcomes related directly to project activities
- ❖ Degree to which the management team is qualified to assess project activities
- ❖ Plans to invite external consultants and/or experts to assess project activities and measure success

Comments:

- Performance measures are inadequate since project success is based primarily upon participation numbers.
- There is no plan for assessment of student learning.
- Given the magnitude of the project and its strong focus on the Loyola community, this project could greatly benefit from ongoing external evaluation.

TOTAL SCORE: 67

BASES OF RATING

The activities involved in building bridges and partnering with local high schools serve as significant tools for recruiting and retaining local students at post-secondary institutions. Thus, both Loyola and New Orleans could benefit substantially from this project. The proposal articulates strong curricular goals, but does not provide sufficient detail for the panel to evaluate the potential for success. The project leadership is well qualified and enthusiastic. Of serious concern, however, is the number and size of the faculty/student research teams, which appear to be unwieldy. This might make it difficult for the investigators to find adequate numbers of faculty mentors.

The panel recommends that funding be reduced from the requested $175,000 to a level of $100,000 per year, except for year 1. In year 1, the PES commitment of $100,000 will be supplemented by $125,000 of ESIP funds for a total of $225,000. The panel recommends that the request for faculty and staff salaries be reduced by half, and that the number and size of teams be reduced accordingly.

Rank: 7

Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram (PES)
Criteria for Review

Proposal Number	**004PKSFI-E-07 (Biological Sciences)**
Proposal Title	**Mentoring at McNeese State University (McMentor)**
Submitting Institution/PI	**McNeese State University/Luther Stevenson, III**
Total Amount Requested	**$163,010**

1. Focus on the Improvement of Undergraduate Science Education (40%): SCORE: 20

- ❖ Degree to which proposed activities target gaps and opportunities in the early post-secondary STEM pipeline
- ❖ Ability of proposed activities to attract and retain students in STEM disciplines
- ❖ Expertise of the faculty to implement proposed activities and achieve significant change
- ❖ Strength and significance of proposed work

Comments:

- The proposed director of mentoring should provide necessary leadership for enhanced peer mentoring, an excellent approach to improving student performance.
- A concrete plan to engage students in need or at risk must be developed as a core element of the project.
- The targets for reductions of the Withdrawal plus Failure (W+F) rate and increases in student success appear arbitrary.
- The panel is concerned that the proposal does not address any underlying need for curricular or laboratory reform or innovative pedagogy, but instead focuses all responsibility for success or failure on the students.

2. Broad Impact/Workforce Development (25%): SCORE: 13

- ❖ Potential impact of the project on educational quality and accessibility in the participating institution(s)
- ❖ Potential for project impact on local and regional economic development
- ❖ Potential impact of the project in the community
- ❖ Relationship of activities to development of skills needed in the local and regional workforce
- ❖ Potential to advance students to higher, marketable skill levels in science and technology
- ❖ Potential to advance job creation and training opportunities

Comments:
- If the project is successful, student retention is likely to increase.
- Retention of science majors and improvement of STEM skills are major benefits to the institution and the region.

3. Institutional Leveraging (10%): SCORE: 8

- ❖ Degree to which participating institution(s) provides the necessary tangible support for project activities
- ❖ Willingness of the institution(s) to provide non-cash matching or other resources to ensure the success of the project
- ❖ Degree to which project activities and focus reflect institutional priorities
- ❖ Non-institutional support garnered for the project or related to project activities

Comments:
- McNeese demonstrates its commitment to the project in its pledge to assume the bulk of the mentoring director's salary after year 1.
- This modest request for additional resources is part of a much larger institutional commitment, both philosophical and financial, to educational improvement and student success.

4. Sustainability and Scalability (15%): SCORE: 12

- ❖ Institutional and partnership commitments to sustaining project activities beyond BoR funding
- ❖ Alignment of activities with a realistic and clearly delineated time frame for development and implementation
- ❖ Achievable plans for sustaining activities and scaling them into broader segments of the institution's teaching and learning base
- ❖ Plans for sharing results and outcomes, and building "best practices" models
- ❖ Direction of project activities toward long-term development and stability

Comment:
The institutional support of the director's position and peer mentoring funds demonstrates sustainability of the project, as do plans to expand mentoring efforts to all disciplines during succeeding years.

5. Assessment (10%): SCORE: 5

- ❖ Identification of measurable outcomes related directly to project activities
- ❖ Degree to which the management team is qualified to assess project activities
- ❖ Plans to invite external consultants and/or experts to assess project activities and measure success

Comments:

- The elements for measuring success are identified, but details related to implementation of a comprehensive assessment plan are not provided.
- The importance of measuring student learning is mentioned, but plans for outcomes assessment are not provided.

TOTAL SCORE: 58

BASES OF RATING

This proposal focuses on changing student behavior through peer mentoring and has excellent plans for implementing a student-to-student mentoring program for the STEM disciplines. The panel is concerned, however, that the proposal includes no plans for addressing other problems related to student success and retention, particularly those concerning curriculum design and faculty performance. Given the complexity of the challenge, addressing a single issue without addressing other related problems is unlikely to result in overall improvement. Very little faculty support for proposed activities is documented.

The panel recommends funding at the requested level of $59,210 from ESIP funds for the first year. The remaining three years should be supported with PES funds, at the level of $34,600 per year.

Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram (PES)
Criteria for Review

Proposal Number	**006PKSFI-E-07 (Biological Sciences)**
Proposal Title	**Natural Solutions to Soil Erosion and Workforce Development in Wetland Ecologies**
Submitting Institution/PI	**Nunez Community College/Stephen Waddell**
Total Amount Requested	**$1,924,550**

1. Focus on the Improvement of Undergraduate Science Education (40%): SCORE: 10

- Degree to which proposed activities target gaps and opportunities in the early post-secondary STEM pipeline
- Ability of proposed activities to attract and retain students in STEM disciplines
- Expertise of the faculty to implement proposed activities and achieve significant change
- Strength and significance of proposed work

Comments:

- This proposal is focused primarily on the partnership between Nunez and Coastal Environments, Inc., with little emphasis on the educational components of the project.
- The principal educational element is linked to a program in environmental studies, though the relationship between the industrial partnership and educational activities is not developed.
- It is not clear that the investigators are qualified to lead the project or what role biology students might have.
- There is no documented previous history of Coastal Environments, Inc., partnering with higher education institutions.

2. Broad Impact/Workforce Development (25%): SCORE: 16

- Potential impact of the project on educational quality and accessibility in the participating institution(s)
- Potential for project impact on local and regional economic development
- Potential impact of the project in the community
- Relationship of activities to development of skills needed in the local and regional workforce
- Potential to advance students to higher, marketable skill levels in science and technology
- Potential to advance job creation and training opportunities

Comments:
- The educational impact of the project is not clearly identified, though it should elevate the technical capabilities of science students.
- The proposed oyster beds should have an impact on the community and regional environments.
- The programmatic goals are extremely narrow.
- The local workforce should be impacted in the short term, but long-term effects are uncertain.

3. Institutional Leveraging (10%): SCORE: 4

- ❖ Degree to which participating institution(s) provides the necessary tangible support for project activities
- ❖ Willingness of the institution(s) to provide non-cash matching or other resources to ensure the success of the project
- ❖ Degree to which project activities and focus reflect institutional priorities
- ❖ Non-institutional support garnered for the project or related to project activities

Comments:
- The requested budget is much too high for the P-KSFI PES; it is not clear that the project can be successful if it is reduced significantly.
- There is no request for ESIP funding, though Nunez is eligible to receive such resources.

4. Sustainability and Scalability (15%): SCORE: 6

- ❖ Institutional and partnership commitments to sustaining project activities beyond BoR funding
- ❖ Alignment of activities with a realistic and clearly delineated time frame for development and implementation
- ❖ Achievable plans for sustaining activities and scaling them into broader segments of the institution's teaching and learning base
- ❖ Plans for sharing results and outcomes, and building "best practices" models
- ❖ Direction of project activities toward long-term development and stability

Comment:
Sustainability and scalability of this project is uncertain, in terms of both its educational and broader objectives.

5. Assessment (10%): SCORE: 4

- ❖ Identification of measurable outcomes related directly to project activities
- ❖ Degree to which the management team is qualified to assess project activities
- ❖ Plans to invite external consultants and/or experts to assess project activities and measure success

Comments:

- No plans for assessment of student learning are provided.
- Outcomes identified were linked principally with the success of the industrial partner, rather than with the effects of proposed activities on Nunez's educational and workforce development missions.

TOTAL SCORE: 40

BASES OF RATING

This is a potentially significant project for reclaiming Louisiana's eroding coastline, but it does not meet the stated requirements of the P-KSFI PES. The educational components of the program, central to P-KSFI PES, were inadequately addressed, including curricular reforms and the role of students in the project. While the panel empathizes with the need to recover from the hurricanes, it is unable to recommend funding for a project clearly beyond the boundaries of this program.

Post-Katrina Support Fund Initiative (P-KSFI) Primarily Education Subprogram (PES)
Criteria for Review

Proposal Number	**007PKSFI-E-07 (Biological Sciences)**
Proposal Title	**Support of Nursing and Health Sciences Programs to Meet Post-Katrina Community Needs**
Submitting Institution/PI	**Our Lady of Holy Cross College/Patricia Prechter**
Total Amount Requested	**$2,128,991**

1. Focus on the Improvement of Undergraduate Science Education (40%): SCORE: 7

- ❖ Degree to which proposed activities target gaps and opportunities in the early post-secondary STEM pipeline
- ❖ Ability of proposed activities to attract and retain students in STEM disciplines
- ❖ Expertise of the faculty to implement proposed activities and achieve significant change
- ❖ Strength and significance of proposed work

Comments:

- Support is requested only for faculty salaries necessary to sustain a successful program. While this request is important, it is not responsive to the PES RFP.
- The project is medical in focus, and no direct connection is made to the eligible discipline of biological sciences.

2. Broad Impact/Workforce Development (25%): SCORE: 17

- ❖ Potential impact of the project on educational quality and accessibility in the participating institution(s)
- ❖ Potential for project impact on local and regional economic development
- ❖ Potential impact of the project in the community
- ❖ Relationship of activities to development of skills needed in the local and regional workforce
- ❖ Potential to advance students to higher, marketable skill levels in science and technology
- ❖ Potential to advance job creation and training opportunities

Comment:

The potential impact of this project on the New Orleans community and its strong nursing workforce development element are important strengths. The institution plans to expand the workforce in an area of extremely high need in the region.

3. Institutional Leveraging (10%): SCORE: 1

- Degree to which participating institution(s) provides the necessary tangible support for project activities
- Willingness of the institution(s) to provide non-cash matching or other resources to ensure the success of the project
- Degree to which project activities and focus reflect institutional priorities
- Non-institutional support garnered for the project or related to project activities

Comments:
The project clearly reflects institutional priorities, but does not include any institutional support or leveraging. While this is understandable in light of OLHC's financial constraints, it is of concern when the support requested is for recurring expenses like faculty salaries.

4. Sustainability and Scalability (15%): SCORE: 2

- Institutional and partnership commitments to sustaining project activities beyond BoR funding
- Alignment of activities with a realistic and clearly delineated time frame for development and implementation
- Achievable plans for sustaining activities and scaling them into broader segments of the institution's teaching and learning base
- Plans for sharing results and outcomes, and building "best practices" models
- Direction of project activities toward long-term development and stability

Comment:
With no clearly articulated educational objectives that are aligned with biological sciences, the plans for sustainability and scalability could not be considered.

5. Assessment (10%): SCORE: 1

- Identification of measurable outcomes related directly to project activities
- Degree to which the management team is qualified to assess project activities
- Plans to invite external consultants and/or experts to assess project activities and measure success

Comment:
The assessment plan is inadequate, based solely on tracking the numbers of students enrolled and those who complete degrees.

TOTAL SCORE: 28

BASES OF RATING

The panel praises Our Lady of Holy Cross for staying true to its mission of educating students, serving the community, and maintaining a strong faculty base. Unfortunately, the proposed project does not align with the objectives or eligibility requirements of the PES. The panel therefore does not recommend funding.

APPENDIX A

P-KSFI Primarily Education Proposals Received

Listed alphabetically by Institution, PI Last Name

Name	Institution	Department
Duclos , Warren 001PKSFI-E-07 Information Technology	Delgado Community College	Computer Information Technology ***Revised and New Curricula to Meet Post-Katrina Employment Development Needs of the Region***
Hutchings , Nathan 002PKSFI-E-07 Biolog'cal Sciences	Louisiana State University - Shreveport	Biological Sciences *Shreverport/Bossier SciNet: Using Information Technology Resources to Develop Interdisciplinary Life Science Education Enhancements in Freshman/Sophomore Life Science and High School Curricula*
Jordan , Frank 003PKSFI-E-07 Biological Sciences	Loyola University	Biological Sciences *An Interdisciplinary and Experimental Approach to Strengthen Recruitment, Retention, and Training in Biological and Materials Sciences in Post-Katrina New Orleans*
Stevenson III , Luther 004PKSFI-E-07 Biological Sciences	McNeese State University	Biological and Environmental Sciences *Mentoring at McNeese State University (McMentor)*
Boopathy , Raj 005PKSFI-E-07 Biological Sciences	Nicholls State University	Biological Sciences *Laboratory Education Experiences for Freshmen and Sophomore Level Undergraduate Students in Biological Sciences*
Waddell , Stephen 006PKSFI-E-07 Biological Sciences	Nunez Community College	Biology ***Natural Solutions to Soil Erosion and Workforce De**velopment in Wetland Ecologies*
Prechter , Patricia 007PKSFI-E-07 Biological Sciences	Our Lady of Holy Cross College	Divison of Nursing *Support of Nursing and Health Sciences Programs to Meet Post-Katrina Community Needs*
Norwood , David 008PKSFI-E-07 Materials Science	Southeastern Louisiana University	Chemistry and Physics ***Leveraging Louisiana's Industrial and Human Resources for Post-Katrina Recovery***
Ireland , Shubha 009PKSFI-E-07 Biological Sciences	Xavier University	Biology ***PKSFI/Xavier Biothrust 21: Rebounding from Katrina** and Achieving New Heights in Educating a 21st Century Biosciences Workforce*