

REPORT TO THE LOUISIANA BOARD OF REGENTS
REVIEW OF ENHANCEMENT PROPOSALS IN THE SPECIAL
MULTIDISCIPLINARY CATEGORY

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Prepared by:

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**REPORT TO THE LOUISIANA BOARD OF REGENTS
REVIEW OF MULTIDISCIPLINARY ENHANCEMENT PROPOSALS
FY 2013-14**

Introduction

Eighteen (18) Multidisciplinary Enhancement Program proposals were supplied by the Louisiana Board of Regents staff for review by the panel chair, Dr. P. Jonathan Patchett of the University of Arizona. The proposals were divided into the root disciplines eligible for this year's competition, Business, Chemistry, Education, Mathematics, and Physics/Astronomy, and distributed to five subject-area reviewers. Total funding requested was \$2,532,489, with \$2,436,548 of that amount requested in first-year funds.

Dr. Patchett received the following materials for review: (a) the eighteen (18) proposals submitted; (b) a summary of proposals listing titles, principal investigators, their institutions, funds requested, etc.; (c) the FY 2013-14 Traditional and Undergraduate Enhancement Program Request for Proposals (RFP); and (d) eighteen (18) rating forms.

The subject-area reviewers submitted their evaluations of individual proposals by February 17, 2014 electronically to Dr. Patchett for further review. After careful consideration and communication with subject-area reviewers, the proposals were ranked and \$592,480 in first-year funds was recommended for seven (7) proposals, two (2) of them at a reduced funding level. Table I contains a rank-order list of proposals recommended for funding, with recommended funding levels. Table II contains a rank-order list of proposals recommended for funding should additional funds become available. Table III contains a rank-order list of proposals not recommended for funding.

A summary of all proposals submitted (Appendix A) and a copy of the rating forms used in the evaluations (Appendix B) are attached at the end of the report.

MULTIDISCIPLINARY ENHANCEMENT, FY 2013-14

SUBJECT-AREA REVIEWERS

Dr. Tim Carroll, University of South Carolina	Business
Dr. Sheila Browne, Mount Holyoke College	Chemistry
Dr. Gail Dickinson, Texas State University	Education
Dr. William Bauldry, Appalachian State University	Mathematics
Dr. Steven Carlip, University of California-Davis	Physics/Astronomy

**TABLE I
PROPOSALS HIGHLY RECOMMENDED FOR FUNDING**

Rank	Rating	Proposal Number	Institution	First Year Funds Requested	First Year Funds Recommended	Second Year Funds Requested	Second Year Funds Recommended
1	98	03MUL-14	LaTech	\$49,947	\$49,947		
2	96	17MUL-14	UNO	\$98,832	\$98,832		
3	94	04MUL-14	LaTech	\$86,100	\$86,100		
4	93	09MUL-14	Nicholls	\$131,100	\$131,100		
5	87	12MUL-14	SU-NO	\$86,108	\$66,158	\$86,108	\$50,000
6	86	07MUL-14	Nicholls	\$115,343	\$115,343		
7	85	08MUL-14	Nicholls	\$56,133	\$45,000		
TOTALS:				\$623,563	\$592,480	\$86,108	\$50,000

**TABLE II
PROPOSALS RECOMMENDED IF ADDITIONAL FUNDING BECOMES AVAILABLE**

Rank	Rating	Proposal Number	Institution	First Year Funds Requested	First Year Funds Recommended	Second Year Funds Requested	Second Year Funds Recommended
8	84	13MUL-14	Tulane	\$187,165	\$187,165		
9	83	01MUL-14	LSU-BR	\$350,000	\$350,000		
10	82	15MUL-14	UL-L	\$184,437	\$184,437		
11	77	11MUL-14	SU-BR	\$89,015	\$89,015		
12	72	05MUL-14	Loyola	\$302,670	\$302,670		
13	71	06MUL-14	Loyola	\$80,520	\$80,520		
TOTALS:				\$1,193,807	\$1,193,807	\$0	\$0

**TABLE III
PROPOSALS NOT RECOMMENDED FOR FUNDING**

Rank	Rating	Proposal Number	Institution	First Year Funds Requested	First Year Funds Recommended	Second Year Funds Requested	Second Year Funds Recommended
14	69	14MUL-14	UL-L	\$103,583	\$0	\$9,833	\$0
15	68	18MUL-14	Xavier	\$168,797	\$0		
16	67	02MUL-14	LSUHSC-S	\$57,865	\$0		
16	67	10MUL-14	SLU	\$160,033	\$0		
18	59	16MUL-14	UL-L	\$128,900	\$0		
TOTALS:				\$619,178	\$0	\$9,833	\$0

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER:

01MUL-14

ROOT DISCIPLINE:

Physics/Astronomy

INSTITUTION: Louisiana State University and A&M College-Baton Rouge

TITLE OF PROPOSAL: In-Vivo Small Animal Magnetic Resonance Imaging System to Enhance Teaching and Research

PRINCIPAL INVESTIGATOR: Guang Jia

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 5 (of 5 points)
A.3 4 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 1 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 7 (For S/E)
or _____ (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 9 (of 10 points)
B.2 18 (of 21 points)
B.3 5 (of 5 points)
B.4 5 (of 5 points)
B.5 4 (of 5 points)
B.6 2 (of 5 points)
B.7 3 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 11 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes _____ No x

G. Total Score:

83

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$350,000
RECOMMENDATIONS: Recommended Amount: \$350,000

(if additional funds become available)

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire a noncryogenic tabletop MRI unit for small animals, primarily rodents, to be used in medical physics education and research. The equipment would have a valuable impact on both research and teaching, and would significantly strengthen the medical physics program. The education component of the plan is well developed, including the opportunity to learn Institutional Animal Care and Use Committee (IACUC) protocol. The research component is strong, though the importance to the research of Co-PIs Xin Li and Aixin Hou is not so clearly developed. In the Impact on Faculty Development section, the description of improvement of quality and effectiveness of faculty teaching should have been further developed. Support letters from two scientists who are already Co-PIs on the proposal are superfluous. Under Housing and Maintenance, there is no discussion of plans for maintenance of this expensive equipment. A formal price quotation for equipment would have helped evaluation of the proposal. The equipment costs are presented as the rounded total of \$400,000 with no breakdown of individual pieces. Though the institutional match is significant, the proposal would represent nearly 60% of the funds anticipated to be available for this competition. The request is for a single instrument, and thus cannot be funded partially. The panel recommends funding only if additional funds become available.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 02MUL-14
ROOT DISCIPLINE: Chemistry

INSTITUTION: Louisiana State University Health Sciences Center-Shreveport

TITLE OF PROPOSAL: Automating Growth Assays for Validation of Tyrosyl-tRNA Synthetase as a Novel Antibiotic Target in Francisella Tularensis

PRINCIPAL INVESTIGATOR: Eric First

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 4 (of 5 points)
A.3 4 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)
C.2 1 (of 1 point)
C.3 2 (of 3 points)

E. Economic and/or Cultural

Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)
E.2a 4 (For S/E)
or _____ (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 5 (of 10 points)
B.2 15 (of 21 points)
B.3 3 (of 5 points)
B.4 3 (of 5 points)
B.5 3 (of 5 points)
B.6 3 (of 5 points)
B.7 3 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

67

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$57,865
RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire an infinite microplate reader to upgrade the Biosafety Level 3 facility so that automated cell growth assays can be performed for pathogens. The PI has developed a high-throughput aminoacyl-tRNA synthetase assay in the Department of Biochemistry and Molecular Biology. The Co-PI wishes to use the method to follow *F. tularensis* tyrosyl-tRNA synthetase activity in the Department of Microbiology. The institutional match consists of waived screening fees at the Feist-Weiller Cancer Center. This is not a strongly multidisciplinary proposal. All of the proposed activity is within the Health Sciences Center and concerns a single research goal pursued by the two PIs. No indication of the use of the instrument by other researchers was included. The educational benefits, as described, are vague. To the extent that work on this pathogen and potential antidotes is worthy, the panel recommends that this application be submitted to a single-discipline Enhancement competition such as Biology. Funding is not recommended.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 03MUL-14
ROOT DISCIPLINE: Chemistry

INSTITUTION: Louisiana Tech University

TITLE OF PROPOSAL: Undergraduate Nanoparticle Manufacturing Lab Enhancement

PRINCIPAL INVESTIGATOR: Dennis Patrick O'Neal

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 19 (of 21 points)
B.3 5 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 5 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

98

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$49,947
RECOMMENDATIONS: Recommended Amount: \$49,947

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal requests a dynamic light scattering system to characterize nanoparticles. It will be used in biomedical, chemical and engineering applications for mainly educational purposes. The institution is providing \$10,500 in matching funds, a significant positive for a low-cost proposal. This is a very well-written request with clear goals and well-thought-out uses in the curriculum. The instrumentation has a clear impact on a very relevant area of current research interest in academics and industry, and as such becomes a critical element of student training. Full funding is recommended.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 04MUL-14
ROOT DISCIPLINE: Chemistry

INSTITUTION: Louisiana Tech University

TITLE OF PROPOSAL: Acquisition of Raman Microscopy for Characterization of Macro- to Nanoscale Systems

PRINCIPAL INVESTIGATOR: Adarsh Radadia

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 5 (of 5 points)
A.3 4 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 19 (of 21 points)
B.3 5 (of 5 points)
B.4 4 (of 5 points)
B.5 4 (of 5 points)
B.6 4 (of 5 points)
B.7 5 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

94

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$86,100
RECOMMENDATIONS: Recommended Amount: \$86,100

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire a confocal Raman microscope for the College of Engineering and Science. PIs from chemistry, physics, biomedical engineering, chemical engineering, and electrical engineering contributed to the proposal. Each PI has worked with Raman spectroscopy and is currently engaged in research projects that use Raman. This proposal stands out for its organization, clearly stated and obtainable goals, and for being truly multidisciplinary. The College will provide \$15,200 in cash as matching funds, a very positive aspect. The impact of the instrument on research is clearly described. Although the numbers of students taking courses where the Raman would be used were listed, details were lacking related to course involvement presented under each PI's work. If used in all these courses, then the educational use of the equipment is also very multidisciplinary. The panel recommends full funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER:

05MUL-14

ROOT DISCIPLINE:

Physics/Astronomy

INSTITUTION: Loyola University

TITLE OF PROPOSAL: Atomic Force Microscope/Ion Conductance Microscope for Upgrade of Research and Teaching Laboratories in Physics and Chemistry Departments at Loyola University New Orleans

PRINCIPAL INVESTIGATOR: Armin Kargol

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 4 (of 5 points)
A.3 3 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 3 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)
E.2a 8 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)
B.2 15 (of 21 points)
B.3 4 (of 5 points)
B.4 2 (of 5 points)
B.5 2 (of 5 points)
B.6 3 (of 5 points)
B.7 4 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 11 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

72

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$302,670

RECOMMENDATIONS: Recommended Amount: \$302,670

(if additional funds become available)

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The proposal seeks to acquire a combined atomic force microscope and ion conductance microscope (AFM/ICM system) for the Departments of Physics and Chemistry. The AFM is standard technology, while the ICM is new technology, useful especially for imaging living cells. The proposal is truly multidisciplinary. The desirability of a good means for imaging and characterizing surfaces at Loyola, for both departments, is clear. The present proposal is an extremely ambitious one, though, requesting a very expensive state-of-the-art instrument that would be used by only a limited number of researchers, given that both departments are small. The proposed research is described technically, but for the most part is not put into a broader context to explain its importance. Though the project is a fine idea, the resources of this competition are limited. It appears a simple AFM, at a fraction of the cost, would meet many of the needs – admittedly not as well, but cost must be considered. In particular, it is noteworthy that the curriculum development component of the proposal focuses almost exclusively on the AFM function. Because the instrument is proposed as an integrated AFM/ICM system, it is not possible to recommend partial funding for an AFM only. Therefore, full funding is recommended only if additional funds become available.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 06MUL-14
ROOT DISCIPLINE: Chemistry

INSTITUTION: Loyola University

TITLE OF PROPOSAL: Powder X-ray Diffractometer for Research and Teaching

PRINCIPAL INVESTIGATOR: Lynn Koplitz

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 5 (of 5 points)
A.3 3 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)
C.2 1 (of 1 point)
C.3 2 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)
E.2a 4 (For S/E)
or _____ (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 3 (of 10 points)
B.2 16 (of 21 points)
B.3 4 (of 5 points)
B.4 4 (of 5 points)
B.5 4 (of 5 points)
B.6 4 (of 5 points)
B.7 4 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 11 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

71

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$80,520

RECOMMENDATIONS: Recommended Amount: \$80,520

(if additional funds become available)

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire a state-of-the-art powder X-ray diffractometer (XRD). It would impact a research program in Physics and another in Chemistry. The institutional match consists of \$10,600 for software licenses and an on-site training workshop by the manufacturer. Although the benefit of the new XRD to the two PIs is clear, the proposal would be strengthened by more information about the impact on curriculum and other research across the Departments of Chemistry and Physics. This proposal would also be improved by plans for broader use in general for the new equipment. The panel recommends full funding only if funds become available.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 07MUL-14
ROOT DISCIPLINE: Chemistry

INSTITUTION: Nicholls State University

TITLE OF PROPOSAL: Enhanced Research Support and Facilities for Undergraduates

PRINCIPAL INVESTIGATOR: Allyse Ferrara

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 2 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)
E.2a 8 (For S/E)
or _____ (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)
B.2 17 (of 21 points)
B.3 4 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 4 (of 5 points)
B.7 4 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 11 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes _____ No x

G. Total Score:

86

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$115,343

RECOMMENDATIONS: Recommended Amount: \$115,343

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal requests funds to equip a multipurpose audio-visual room with a second poster printer, multiple laptops and projectors, and a microfiche/film scanner with desktop controller. Projectors and controlling laptops would be transportable across campus using reinforced cases. The twin goals are to foster undergraduate projects and to encourage participation in competitive symposia, particularly for science students. The equipment will certainly make poster presentations and classroom presentations easier, and will be widely used. Location of the audiovisual facility in the library, rather than within a single department, is a significant benefit. The equipment will serve several disciplines, with the sciences, math, and business highlighted in the proposal. To the extent that the equipment would be used in classrooms, one could argue that the University should already be providing such facilities from teaching resources, but Nicholls may lack the resources for such a major upgrade. The panel recommends full funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 08MUL-14
ROOT DISCIPLINE: Physics/Astronomy

INSTITUTION: Nicholls State University

TITLE OF PROPOSAL: Enhancing In-class and Distance Learning in the Physical Sciences at Nicholls State University

PRINCIPAL INVESTIGATOR: Chadwick Young

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)
E.2a 9 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)
B.2 17 (of 21 points)
B.3 4 (of 5 points)
B.4 5 (of 5 points)
B.5 4 (of 5 points)
B.6 5 (of 5 points)
B.7 3 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

85

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$56,133
RECOMMENDATIONS: Recommended Amount: \$45,000

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This is a request from the Department of Physical Sciences for some basic classroom instructional equipment, including projectors, sound systems, and interactive pen displays. The rooms in question already have lower-quality projectors. The need is clearly described, and though this is standard university equipment, Nicholls may lack the funds for such a major upgrade. A \$5,500 cash match is a strong positive for the proposal. The equipment will benefit physical science majors as well as many more students in other disciplines including history and geography. Although there are references to recent research in pedagogy, no description is given of plans to scientifically assess the effects of the proposed changes. While references are made to online courses and distance learning, and distance learning features in the proposal title, few details are provided. Perhaps in-house support for installation of this equipment is not available, but installation fees of \$3,500 per classroom (total \$10,500) appear excessive. The panel recommends partial funding of \$45,000, with reductions to be made at the PI's discretion.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER:

09MUL-14

ROOT DISCIPLINE:

Chemistry

INSTITUTION: Nicholls State University

TITLE OF PROPOSAL: Enhancing Heavy Metal Analytical Capabilities at Nicholls State University

PRINCIPAL INVESTIGATOR: Enmin Zou

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 9 (For S/E)
or (of 10 points)
E.2b (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 19 (of 21 points)
B.3 5 (of 5 points)
B.4 4 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 5 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No

G. Total Score:

93

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$131,100

RECOMMENDATIONS: Recommended Amount: \$131,100

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks to acquire two instruments to measure heavy metals in the Department of Biological Sciences. Applications of the equipment feature study of heavy metals in coastal environments in Louisiana, and as such the work is interdisciplinary with environmental toxicology and the study of a range of marine and coastal processes. Having the ability to measure mercury and other heavy metal contaminants in the local environment has a very important regional impact for Louisiana. Training environmental scientists in measuring heavy metal concentrations is also very relevant. These instruments should have wide use in undergraduate courses, though while potential courses are listed, the proposal does not provide details. The panel recommends full funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 10MUL-14

ROOT DISCIPLINE: Education

INSTITUTION: Southeastern Louisiana University

TITLE OF PROPOSAL: Using Telepresence for Transdisciplinary Collaboration

PRINCIPAL INVESTIGATOR: Martha Ratcliff

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 2 (of 5 points)
A.3 1 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 3 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural

Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)
E.2a _____ (For S/E)
or _____ (of 10 points)
E.2b 5 (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 15 (of 21 points)
B.3 3 (of 5 points)
B.4 2 (of 5 points)
B.5 2 (of 5 points)
B.6 2 (of 5 points)
B.7 5 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

67

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$160,033

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal requests equipment for establishing telepresence between learning environments in the Department of Teaching and Learning and the College of Nursing. There are two goals: to provide real-time connections between general, special education, and nursing students; and to use the equipment generally for telepresence functions at the University. The proposal is difficult to follow. The Current Situation section does not describe current capabilities with regard to telepresence. Although the proposal emphasizes students being able to collaborate anywhere, any time, with any device, the work plan actually focuses on real-time, in-class collaborations. The case for using telepresence with students across the University is weak. Face-to-face meetings or free software may accomplish as much. Is the requested software the industry standard? Will special education or nursing students use it once they are in the workforce? Objective 1 under Goal 1, the designation of a committee to explore feasibility and common curricular themes, should have been done before submission of the proposal. As a result, the proposal would have been strengthened by specific examples of courses that could be collaborative. The work plan does not include any activities related to Objectives 3-6 under Goal 2. The arguments for impact on quality of students and faculty development are weak. Since faculty have not collaborated previously, it is not clear what the actual impact of the software would be. If the collaborations described in the section on relationships with industrial/institutional sponsors were more central, it would strengthen the rationale for telepresence. Funding is not recommended.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 11MUL-14
ROOT DISCIPLINE: Physics/Astronomy

INSTITUTION: Southern University and A&M College-Baton Rouge

TITLE OF PROPOSAL: Equipment Enhancement for Research and Education on Nitrogen Functionalized Carbon Nanostructures as New Catalysts for Fuel Cells and Lithium-Air Batteries

PRINCIPAL INVESTIGATOR: Guang-Lin Zhao

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 4 (of 5 points)
A.3 4 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)
B.2 17 (of 21 points)
B.3 3 (of 5 points)
B.4 3 (of 5 points)
B.5 3 (of 5 points)
B.6 2 (of 5 points)
B.7 2 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

77

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$89,015
RECOMMENDATIONS: Recommended Amount: \$89,015

(if additional funds become available)

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The Departments of Physics and Chemistry seek acquisition of equipment to synthesize and measure N-doped carbon nanostructures and to investigate their functionality as catalysts in certain batteries and fuel cells. The potential importance of the research is clear, and the proposal makes a good case for this direction. The possibility of connecting with first principles quantum calculations (density functional theory) is very intriguing but, unfortunately, not elaborated. The notion appears in the rationale, but does not appear in the detailed research plans. Similarly, while the synthesis and characterization steps described in the rationale are clearly related to the research plan, the final (and crucial) element, "to understand electrocatalytic sites, elementary catalytic reaction paths, and reaction energy barriers", remains vague and unspecific. The proposed project evaluation is not well developed and the effect on curriculum is poorly described. Improving quality of instruction is not discussed in the faculty development section. Full funding is recommended only if funds become available.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 13MUL-14
ROOT DISCIPLINE: Chemistry

INSTITUTION: Tulane University

TITLE OF PROPOSAL: Acquisition of Nanomaterials Separation and Characterization
Instrumentation

PRINCIPAL INVESTIGATOR: Scott Grayson

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 3 (of 5 points)
A.3 4 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 9 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)
B.2 19 (of 21 points)
B.3 5 (of 5 points)
B.4 1 (of 5 points)
B.5 4 (of 5 points)
B.6 3 (of 5 points)
B.7 5 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 11 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

84

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$187,165

RECOMMENDATIONS: Recommended Amount: \$187,165

(if additional funds become available)

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks the acquisition of chromatography systems for separation of molecular and nanoparticle materials in polymer research, as well as a Zetasizer for characterization of nanoparticles. The PIs are from the Department of Chemistry, and users are listed from Chemical Engineering, Physics and Biomedical Engineering. The project has significant potential impact on capabilities and would support excellent research, which is well funded by NSF, NIH and BoR, with an outstanding publication record by the PIs. The research has the potential to yield significant economic and scientific impact. The institutional match is impressive. Although it is stated that the instruments would be incorporated into senior courses, there were no details given. The enhancement appears to be mainly for research, with student impact confined to graduate students. Although users from departments other than Chemistry are listed, all four PIs are from Chemistry, and there are no vitae provided for anyone other than the four PIs. In addition, there are no support letters from other units. Stronger evidence of participation and interest from other units is essential in the Multidisciplinary category. The panel recommends full funding only if additional funds become available.

RATING FORM FOR ENHANCEMENT REQUESTS OTHER THAN EQUIPMENT PURCHASES

PROPOSAL NUMBER:

14MUL-14

Physics/Astronomy

INSTITUTION: University of Louisiana at Lafayette

TITLE OF PROPOSAL: Swift Testbed for Agile Research of Space-Science [STARS]

PRINCIPAL INVESTIGATOR: Paul Darby

A. The Current Situation

(Total of 10 Points)

A.1 x No
 A.2 5 (of 5 points)
 A.3 4 (of 5 points)

C. Faculty and Staff Expertise

(Total of 12 Points)

C.1 10 (of 12 points)

D. Economic and/or Cultural Development and Impact

(Total of 12 Points)

D.1 2 (of 2 points)
 D.2a 8 (For S/E)
 or (of 10 points)
 D.2b (For NS/NE)

B. The Enhancement Plan

(Total of 66 Points)

B.1 7 (of 10 points)
 B.2 12 (of 20 points)
 B.3 5 (of 8 points)
 B.4 5 (of 8 points)
 B.5 5 (of 8 points)
 B.6 5 (of 8 points)
 B.7 1 (of 4 points)

E. Previous Support Fund Awards

(No Points Assigned)

F.1 Yes x No

F. Total Score: 69 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

		YEAR 1	YEAR 2
SPECIFIC BUDGETARY RECOMMENDATIONS:	Requested Amount:	\$103,583	\$9,833
	Recommended Amount:	\$0	\$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The proposal seeks funds to develop a cube-satellite kit in the Departments of Electrical and Computer Engineering and Physics. The plan includes an initial experiment involving radiation detection with a flexible design that allows adaptation for other experiments. This is a very interesting idea. The PI has significant relevant experience, although the proposal is lacking in details of that past work. The proposal is poorly written both in style and, more important, content. Very little detail is given about the actual project. The measurable objectives involve such activities as "incorporation into classes and labs" rather than actual progress in constructing the kits. No details are provided about what the backbone of one of these kits would be, including which elements are truly interchangeable. It seems reasonable to use smartphones as controllers, though it is not clear how and what software will be loaded into them. There is no systematic, objective plan to measure pedagogical success; progress will be assessed, somehow, by a "peer review team," but no details are provided. There is insufficient information about the proposed radiation detection experiment. What types of radiation are the proposed detectors sensitive to, and what are the relative sensitivities? What types of radiation are important for space missions? Why were these particular detectors chosen over others? What are their advantages and disadvantages? Although the proposal communicates excitement, some calm evaluation and argumentation along with the provision of more concrete information would help. Funding is not recommended.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 15MUL-14
ROOT DISCIPLINE: Education

INSTITUTION: University of Louisiana at Lafayette

TITLE OF PROPOSAL: Kiln Room Enhancement for Art Education and Visual Arts

PRINCIPAL INVESTIGATOR: John Gargano

A. The Current Situation
(Total of 10 Points)
A.1 Yes x No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment
(Total of 10 Points)
C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

**E. Economic and/or Cultural
Development and Impact**
(Total of 12 Points)
E.1 2 (of 2 points)
E.2a (For S/E)
or _____ (of 10 points)
E.2b 9 (For NS/NE)

B. The Enhancement Plan
(Total of 56 Points)
B.1 7 (of 10 points)
B.2 12 (of 21 points)
B.3 5 (of 5 points)
B.4 3 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 2 (of 5 points)

D. Faculty and Staff Expertise
(Total of 12 Points)
D.1 12 (of 12 points)

F. Previous Support Fund Awards
(No Points Assigned)
G.1 Yes _____ No x

G. Total Score: 82 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY **Requested Amount:** \$184,437
RECOMMENDATIONS: **Recommended Amount:** \$184,437

(if additional funds become available)

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The Department of Visual Arts at ULL requests funding to upgrade a kiln laboratory for faculty and student work. The upgrade is a package of three custom-made kilns for \$154,000 with no individual prices broken out. At a practical level, the proposal presents a strong rationale for upgrading the kilns. There would be greater throughput, and remote operation after hours by students would become possible, with art students learning firing processes much more effectively. The proposal is interdisciplinary only to the extent that the Department of Visual Arts supervises art education for the College of Education. Otherwise, the activities and benefits of the enhancement appear to be confined to the Department of Visual Arts. Concrete numbers for students taking courses in these programs would have helped the proposal. Several of the goals and objectives are vague and in need of quantification and assessment, for which plans are often not provided. The impact on curriculum section could be enhanced by stating specific goals for specific courses. The computerized firing may help students develop additional skills, but it will not enhance the use of sensory abilities if they are not there while the firing occurs. The addition of the kiln firing process to the Art Education curriculum could have been spelled out more clearly in the goals and objectives. How many students will be added as a result? How does Architecture and Design fit in this proposal? Overall, the lack of specific course information, together with the lack of concrete student numbers and the provenance of those students, hampers evaluation of the proposal because the true importance of the ceramics laboratory cannot be assessed. Full funding is recommended only if funds become available.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 16MUL-14
ROOT DISCIPLINE: Chemistry

INSTITUTION: University of Louisiana at Lafayette

TITLE OF PROPOSAL: Thermal Analysis System for Integration with Polymer Science Teaching and Research

PRINCIPAL INVESTIGATOR: Devesh Misra

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 0 (of 5 points)
A.3 0 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 0 (of 6 points)
C.2 0 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 8 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 9 (of 10 points)
B.2 9 (of 21 points)
B.3 4 (of 5 points)
B.4 4 (of 5 points)
B.5 4 (of 5 points)
B.6 4 (of 5 points)
B.7 0 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

59

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$128,900
RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal from ULL's Department of Chemical Engineering seeks acquisition of a thermal analysis system consisting of three components (thermogravimetric analyzer, differential scanning calorimeter, and dynamic thermo-mechanical analyzer). The equipment is to strengthen polymer science teaching and research. These instruments are very important in polymer research and physical chemistry. It is unfortunate that the proposal did not break out the three instruments, as they appear to be three, free-standing machines. The price quotation is also outdated, from December 2012. However, the main issue with the proposal is that the PI's website for his Laboratory of Structural and Functional Materials, at <http://materials.louisiana.edu/equipment/index.shtml> lists as the first three pieces of available equipment the following: differential scanning calorimeter, differential thermal analyzer, dynamic mechanical analyzer. These instruments appear to be the same or very close in purpose to those requested. The proposal is very explicit in section C.2 that "At present UL Lafayette does not have a thermal analysis system". The existing, at least related, instruments are not mentioned in the proposal. If an upgrade or additional, similar instruments are desired, the proposal should describe the shortcomings of the existing instruments. The proposal cannot be evaluated fairly if existing equipment is not described. The panel does not recommend funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 17MUL-14
ROOT DISCIPLINE: Physics/Astronomy

INSTITUTION: University of New Orleans

TITLE OF PROPOSAL: Materials Science Lab: Hands on Experiment Experience with the Energy and Electronic Materials for UNO Students

PRINCIPAL INVESTIGATOR: Leszek Malkinski

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 21 (of 21 points)
B.3 4 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 4 (of 5 points)
B.7 4 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes x No _____

G. Total Score:

96

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$98,832
RECOMMENDATIONS: Recommended Amount: \$98,832

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal from the Advanced Materials Research Institute seeks funds to build a materials science teaching lab for graduate and advanced undergraduate students, in part to support a new Ph.D. program that is in the final stages of approval. The proposal is highly interdisciplinary, and makes extremely good use of existing research-oriented equipment. The PIs are clearly very well qualified, and the resulting lab would be one of only a few in the country. The proposal has no research component, but this is a consequence of the nature of the project. There is perhaps a slightly underdeveloped assessment component. It would be useful to have more quantitative measurements of the impact of the new lab, but this can also be quite difficult. The budget includes \$8,500 in supplies. The request to fund supplies is acceptable in order to establish the lab, though a funding source for future supplies should be established. The panel recommends full funding.

RATING FORM FOR ENHANCEMENT REQUESTS OTHER THAN EQUIPMENT PURCHASES

PROPOSAL NUMBER:

18MUL-14

ROOT DISCIPLINE:

Mathematics

INSTITUTION: Xavier University

TITLE OF PROPOSAL: Virtualization – A High-Yield, Low-Cost Alternative for Outfitting
Computer-Based STEM Classrooms

PRINCIPAL INVESTIGATOR: Raymond Lang

A. The Current Situation

(Total of 10 Points)

A.1 Yes x No
A.2 2 (of 5 points)
A.3 4 (of 5 points)

C. Faculty and Staff Expertise

(Total of 12 Points)

C.1 10 (of 12 points)

D. Economic and/or Cultural

Development and Impact

(Total of 12 Points)

D.1 1 (of 2 points)
D.2a 6 (For S/E)
or (of 10 points)
D.2b (For NS/NE)

B. The Enhancement Plan

(Total of 66 Points)

B.1 7 (of 10 points)
B.2 15 (of 20 points)
B.3 5 (of 8 points)
B.4 5 (of 8 points)
B.5 5 (of 8 points)
B.6 6 (of 8 points)
B.7 2 (of 4 points)

E. Previous Support Fund Awards

(No Points Assigned)

F.1 Yes No x

F. Total Score:

68

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$168,797

RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks funding to replace aging desktop computers with a virtual desktop system. It is interdisciplinary in that it shares the computing facility between mathematics and computer science, though without significant cross-fertilization. Though the project was submitted as non-equipment, over 50% of the request is for hardware. Because the current computing facilities appear to be severely underfunded, virtualization is an excellent choice. The best developed portion of the proposal is the description of benefits for computer science. The description of benefits to geometry instruction is adequate, but there is not enough detail to determine what the PIs intend to do beyond using Geometer's Sketchpad to enhance student success. For calculus instruction, no concrete examples of enhancement are provided. Wolfram Alpha is a good tool, but is limited to single statement tasks. Moreover, Wolfram Alpha can be accessed via web devices directly; only a web browser is needed. The PIs could leverage other open-source software such as Sage or XCas to much better advantage than Alpha. There are also well-designed web-based tools that can accomplish the "large data" activities the PIs have proposed. The project assessment design is weak, with the PIs relying on computer usage logs to demonstrate that computers have been used. Using computers does not, in and of itself, enhance educational effectiveness. The PIs claim three pilot courses will enhance student outcomes, but give no assessment mechanism. Overall, this proposal contains a good idea for needed facilities, but the project is not adequately developed. Funding is not recommended.

Appendix A

Summary List of Proposals

Proposals Submitted to the Traditional Enhancement Program - Multidisciplinary
for the FY 2013-14 Review Cycle

Proposal Number	PI Name	Institution	Duration	Equipment/Non	New/Continuation	Project Title	Amount Requested		
							Year 1	Year 2	Total
001MUL-14	Dr. Guang Jia	Louisiana State University and A & M College - Baton Rouge	1 Year	E	New Request	In-vivo Small Animal Magnetic Resonance Imaging System to Enhance Teaching and Research	\$350,000.00	\$0.00	\$350,000.00
002MUL-14	Prof. Eric First	Louisiana State University Health Sciences Center Shreveport	1 Year	E	New Request	Automating growth assays for validation of tyrosyl-tRNA synthetase as a novel antibiotic target in Francisella tularensis	\$57,865.00	\$0.00	\$57,865.00
003MUL-14	Dr. Dennis O'Neal	Louisiana Tech University	1 Year	E	New Request	Undergraduate Nanoparticle Manufacturing Lab Enhancement	\$49,947.00	\$0.00	\$49,947.00
004MUL-14	Prof. Adarsh Radadia	Louisiana Tech University	1 Year	E	New Request	Acquisition of Raman Microscopy for Characterization of Macro- to Nanoscale Systems	\$86,100.00	\$0.00	\$86,100.00
005MUL-14	Prof. Armin Kargol	Loyola University New Orleans	1 Year	E	New Request	Atomic Force Microscope/Ion Conductance Microscope for upgrade of research and teaching laboratories in Physics and Chemistry Departments at Loyola University New Orleans.	\$302,670.00	\$0.00	\$302,670.00
006MUL-14	Dr. Lynn Koplitz	Loyola University New Orleans	1 Year	E	New Request	Powder X-ray Diffractometer for Research and Teaching	\$80,520.00	\$0.00	\$80,520.00
007MUL-14	Dr. Allyse Ferrara	Nicholls State University	1 Year	E	New Request	Enhanced Research Support and Facilities for Undergraduates	\$115,343.00	\$0.00	\$115,343.00
008MUL-14	Dr. Chadwick Young	Nicholls State University	1 Year	E	New Request	Enhancing In-class and Distance Learning in the Physical Sciences at Nicholls State University	\$56,133.00	\$0.00	\$56,133.00
009MUL-14	Dr. Enmin Zou	Nicholls State University	1 Year	E	New Request	Enhancing heavy metal analytical capabilities at Nicholls State University	\$131,100.00	\$0.00	\$131,100.00
010MUL-14	Dr. M. Ratcliff	Southeastern Louisiana University	1 Year	E	New Request	Using Telepresence for Transdisciplinary Collaboration	\$160,033.00	\$0.00	\$160,033.00
011MUL-14	Prof. Guang-Lin Zhao	Southern University and A&M College - Baton Rouge	1 Year	E	New Request	Equipment Enhancement for Research and Education on Nitrogen Functionalized Carbon Nanostructures as New Catalysts for Fuel Cells and Lithium-Air Batteries	\$89,015.00	\$0.00	\$89,015.00

Proposals Submitted to the Traditional Enhancement Program - Multidisciplinary
for the FY 2013-14 Review Cycle

Proposal Number	PI Name	Institution	Duration	Equipment/ Non	New/ Continuation	Project Title	Amount Requested		
							Year 1	Year 2	Total
012MUL-14	Dr. Igwe Udeh	Southern University at New Orleans	2 Years	NE	New Request	Enrollment, Retention and Graduation Enhancements for the Colleges of Business and Education	\$86,108.00	\$86,108.00	\$172,216.00
013MUL-14	Prof. Scott Grayson	Tulane University	1 Year	E	New Request	Acquisition of Nanomaterials Separation and Characterization Instrumentation	\$187,165.00	\$0.00	\$187,165.00
014MUL-14	Dr. Paul Darby	University of Louisiana at Lafayette	2 Years	NE	New Request	Swift Testbed for Agile Research of Space-science [STARS]	\$103,583.00	\$9,833.00	\$113,416.00
015MUL-14	Prof. JOHN GARGANO	University of Louisiana at Lafayette	1 Year	E	New Request	Kiln Room Enhancement for Art Education and Visual Arts	\$184,437.00	\$0.00	\$184,437.00
016MUL-14	Prof. Devesh Misra	University of Louisiana at Lafayette	1 Year	E	New Request	Thermal Analysis System for Integration with Polymer Science Teaching and Research	\$128,900.00	\$0.00	\$128,900.00
017MUL-14	Prof. Leszek Malkinski	University of New Orleans	1 Year	E	New Request	Materials Science Lab: Hands on Experiment Experience with the Energy and Electronic Materials for UNO Students	\$98,832.00	\$0.00	\$98,832.00
018MUL-14	Dr. R. Lang	Xavier University	1 Year	NE	New Request	Virtualization – A High-Yield, Low-Cost Alternative for Outfitting Computer-Based STEM Classrooms	\$168,797.00	\$0.00	\$168,797.00

*The RFP restricts second year funding requests to no more than \$50,000.

Total Number of Proposals submitted	18
Total Money Requested for First Year	\$2,436,548.00
Total Money Requested for Second Year	\$95,941.00
Total Money Requested	\$2,532,489.00

Appendix B

Rating Forms

BOARD OF REGENTS SUPPORT FUND ENHANCEMENT PROGRAM

RATING FORM FOR TRADITIONAL AND UNDERGRADUATE ENHANCEMENT PROPOSALS
PURCHASE OF INSTRUCTIONAL AND RESEARCH EQUIPMENT

INSTRUCTIONS: The completed evaluation form should represent the consensus of the expert members of the review panel and, as such, must reflect the final decisions of that panel. Review this form and the program guidelines prior to reading the proposal. The higher the score, the more clearly the proposal satisfies the criterion under consideration.

A. THE CURRENT SITUATION—10 points

- YES ____ NO ____ A.1 Has the applicant adequately described the institution and unit(s)/department(s) that will benefit from the project, especially in terms of mission, faculty, students, and relevant institutional or departmental resources?
- _____ of 5 pts. A.2 To what extent will the proposed project enhance the affected department(s)/unit(s) and/or curricula?
- _____ of 5 pts. A.3 To what extent will the project complement and improve upon existing resources of the department(s) or unit(s)?

B. THE ENHANCEMENT PLAN—56 points

- _____ of 10 pts. B.1 Are the goals and objectives clearly stated? Are they realistic? Are the objectives measurable? Can the objectives be completed within the timeframe detailed in the proposal?
- _____ of 21 pts. B.2 Does the work plan sufficiently describe the activities that will be undertaken to achieve the goals and objectives of the proposal with responsible individuals listed for each activity and a schedule of// activities with benchmarks to be accomplished?
- _____ of 5 pts. B.3 To what extent will the proposed project propel the department(s)/ unit(s) into attaining a high level of regional, national, or international eminence--or maintaining a current high level of eminence--commensurate with degree offerings and/or functions?
- _____ of 5 pts. B.4 To what extent will the proposed project have an impact on the variety and/or quality of curricular offerings and instructional methods within the affected department(s) or unit(s)?
- _____ of 5 pts. B.5 To what extent will the proposed project enhance the ability of the department(s) or unit(s) to attract and/or retain students of high quality, particularly high quality students from Louisiana?
- _____ of 5 pts. B.6 To what extent will the project contribute to improving the quality and effectiveness of faculty teaching and improve faculty pedagogy?
- _____ of 5 pts. B.7 To what extent does the proposal indicate how the PIs will assess/evaluate the degree to which the project has achieved its goals?

C. EQUIPMENT—10 points

- _____ of 6 pts. C.1 To what extent has the proposal established a relationship between the enhancement plan activities and the type of equipment requested? Is the equipment well-justified? Will it significantly enhance the existing technological capability of the department(s)/units(s)? Does it reflect current and projected trends in technology?
- _____ of 1 pt. C.2 Is there a thorough survey of the current equipment inventory and does the proposal plan to make full use of the equipment?
- _____ of 3 pts. C.3 To what extent does the proposal present a reasonable plan to ensure a maximum usable lifetime for the equipment? Are housing and maintenance arrangements for equipment adequate?

D. FACULTY AND STAFF EXPERTISE—12 points

_____ of 12 pts D.1 Are the faculty and support staff appropriately qualified to implement this project? If special training will be required for faculty and/or other personnel, has an appropriate plan been developed?

E. ECONOMIC AND/OR CULTURAL DEVELOPMENT AND IMPACT—12 points

_____ of 2 pts. E.1 To what extent will the project assist in establishing a new relationship or strengthen an existing relationship with one or more industrial/institutional sponsors (e.g., private business, trade organization, professional organization, non-profit or community organization, another college or university or consortium of colleges and universities, federal government agency)?

_____ of 10 pts. E.2 To what extent will the project assist the submitting department(s)/unit(s) in promoting or enhancing economic, cultural and/or academic development and/or resources in Louisiana?

F. PREVIOUS SUPPORT FUND AWARDS—No points assigned

YES___ NO_____ F.1 If the Project Director or Co-Project Director has received previous Support Fund support, has it been adequately documented?

G. TOTAL SCORE (NOTE: Proposals with a total score below 70 will not be recommended for funding.)

_____ of 100 points

SPECIFIC BUDGETARY RECOMMENDATIONS

Requested Amount \$ _____ Recommended Amount \$ _____

I agree to maintain in confidence any information, documentation and material of any kind (hereinafter referred to as "Material") included in this proposal; I further agree not to disclose, divulge, publish, file patent application on, claim ownership of, exploit or make any other use whatsoever of said "Material" without the written permission of the principal investigator. To the best of my knowledge, no conflict of interest is created as a result of my reviewing this proposal.

Reviewer's Name and Institution: _____

Reviewer's Signature: _____ Date: _____

BOARD OF REGENTS SUPPORT FUND ENHANCEMENT PROGRAM

RATING FORM FOR TRADITIONAL AND UNDERGRADUATE ENHANCEMENT PROPOSALS
REQUESTS OTHER THAN EQUIPMENT PURCHASES (e.g., Colloquia, Curricular Revisions, etc.)

INSTRUCTIONS: The completed evaluation form should represent the consensus of the expert members of the review panel and, as such, must reflect the final decisions of that panel. Review this form and the program guidelines prior to reading the proposal. The higher the score, the more clearly the proposal satisfies the criterion under consideration.

A. THE CURRENT SITUATION—10 points

- YES _____ NO _____
- _____ of 5 pts. A.1 Has the applicant adequately described the institution and department(s)/unit(s) that will benefit from the project, especially in terms of mission, faculty, students, and relevant institutional or departmental resources?
- _____ of 5 pts. A.2 To what extent will the proposed project enhance the affected department(s)/unit(s) and/or curricula?
- _____ of 5 pts. A.3 To what extent will the project complement and improve upon existing resources of the department(s)/unit(s)?

B. THE ENHANCEMENT PLAN—66 points

- _____ of 10 pts. B.1 Are the goals and objectives clearly stated? Are they realistic? Are the objectives measurable? Can the objectives be completed within the timeframe detailed in the proposal?
- _____ of 20 pts. B.2 Does the work plan sufficiently describe the activities that will be undertaken to achieve the goals and objectives of the proposal with responsible individuals listed for each activity and a schedule of activities with benchmarks to be accomplished?
- _____ of 8 pts. B.3 To what extent will the proposed project propel the department(s)/unit(s) into attaining a high level of regional, national, or international eminence--or maintaining a current high level of eminence—commensurate with degree offerings and/or functions?
- _____ of 8 pts. B.4 To what extent will the proposed project have an impact on the variety and quality of curricular offerings and instructional methods within the affected department(s) or unit(s)?
- _____ of 8 pts. B.5 To what extent will the proposed project enhance the ability of the department(s) or unit(s) to attract and/or retain students of high quality, particularly high quality students from Louisiana?
- _____ of 8 pts. B.6 To what extent will the project contribute to improving the quality and effectiveness of faculty teaching and improve faculty pedagogy?
- _____ of 4 pts. B.7 To what extent does the proposal indicate how the PIs will assess/evaluate the degree to which the project has achieved its goals?

C. FACULTY AND STAFF EXPERTISE—12 points

- _____ of 12 pts. C.1 Are faculty and support staff appropriately qualified to implement the project? If special training will be required for faculty and/or other personnel, has an appropriate plan been developed?

D. ECONOMIC AND/OR CULTURAL DEVELOPMENT AND IMPACT—12 points

- _____ of 2 pts. D.1 To what extent will the project assist in establishing a new relationship or strengthen an existing relationship with one or more industrial/institutional sponsors (e.g., private business, trade organization, professional organization, non-profit or community organization, or another college or university or consortium of colleges and universities, federal government agency)?
- _____ of 10 pts. D.2 To what extent will the project assist the submitting department(s)/unit(s) in promoting or enhancing economic, cultural and/or academic development and/or resources in Louisiana?

E. PREVIOUS SUPPORT FUND AWARDS—No points assigned

YES___ NO___ E.1 If the Project Director or Co-Project Director has received previous Support Fund support, has it been adequately documented?

F. TOTAL SCORE (NOTE: Proposals with a total score below 70 will not be recommended for funding.)

___ of 100 points

SPECIFIC BUDGETARY RECOMMENDATIONS

Requested Amount \$ _____ Recommended Amount \$ _____

I agree to maintain in confidence any information, documentation and material of any kind (hereinafter referred to as "Material") included in this proposal; I further agree not to disclose, divulge, publish, file patent application on, claim ownership of, exploit or make any other use whatsoever of said "Material" without the written permission of the principal investigator. To the best of my knowledge, no conflict of interest is created as a result of my reviewing this proposal.

Reviewer's Name and Institution: _____

Reviewer's Signature: _____ Date: _____