

**REPORT TO THE
LOUISIANA BOARD OF REGENTS**

**RECRUITMENT OF SUPERIOR GRADUATE STUDENTS COMPONENT
OF THE
BOARD OF REGENTS SUPPORT FUND
FY 2014-15 COMPETITION FOR AWARDS TO BEGIN IN FY 2016-17**

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INTRODUCTION

The review panel for the Recruitment of Superior Graduate Students Program met in Baton Rouge on February 21 and 22, 2015 to discuss and make funding recommendations relative to proposals submitted in the FY 2014-15 competition for awards to begin in FY 2016-17. Members of the panel were Dr. John Mayfield (Chair), Iowa State University; Dr. Roger Chalkley, Vanderbilt University Medical School; and Dr. Charles Ambler, University of Texas at El Paso.

Eight (8) institutions submitted a total of twenty-nine (29) proposals within the disciplines eligible for this year's competition in the Traditional Graduate Fellows subprogram. One (1) university submitted a total of one (1) proposal in the Graduate Fellowships for Teachers subprogram. In some cases two or more departments within an academic unit submitted a single proposal.

Prior to arriving in Baton Rouge, consultants individually read and evaluated each proposal according to the guidelines provided by the Louisiana Board of Regents in the FY 2014-15 Graduate Fellows Request for Proposals. Each consultant assigned a preliminary rating to each proposal before the February meeting. Preliminary composite scores were then computed and facilitated discussions at the panel meeting.

After thorough assessment of the merits of each proposal, the consultants established a rank order for all proposals and recommended monetary levels for awards according to established criteria. Recommendations were made consistent with the limits of available funding as determined by the Board of Regents. Final composite scores assigned to the proposals ranged from 61.3 to 86.8 out of a maximum of 100. The panel did not recommend funding for those proposals receiving scores lower than 75. A total of \$899,500 in first-year monies was recommended for expenditure.

The total amount of first-year funds requested in the Traditional Graduate Fellows subprogram was \$2,578,500. The Graduate Fellowships for Teachers proposal requested first-year funds of \$120,000. Consultants were advised that \$720,000 was allocated for Traditional Graduate Fellows and \$180,000 for Graduate Fellowships for Teachers. The panel was also advised that any funds not committed to proposals submitted for the latter subprogram should be recommended for expenditure under Traditional Graduate Fellows, assuming that a sufficient number of meritorious proposals had been submitted to warrant the transfer.

The panel recommends that eighteen (18) of the twenty-nine (29) proposals submitted under the Traditional Graduate Fellows subprogram and one (1) proposal submitted in the Graduate Fellowships for Teachers subprogram be funded in the amounts specified in Appendix A. Appendix B consists of brief narrative summaries of the panel's assessment of each proposal and Appendix C contains a listing of all proposals submitted under each program.

The cumulative requests substantially exceed the total amount of funding available. Reviewers sought to ascertain the degree to which each award could bring about the successful recruitment of superior graduate students, consistent with the Support Fund goals of enhancing the overall quality of higher education in and the social, cultural and economic development of Louisiana. Moreover, panel members considered in each case whether the dollar value of the requested fellowship stipend would ensure each program's competitiveness with comparable institutions and accord with past recruiting efforts.

Once again, the panel members commend all involved in this ongoing endeavor to elevate the level of graduate study in Louisiana's institutions of higher education.

The panel urges applicants to carefully review the summary critiques, included in this report, relating to each submitted proposal. Most summaries offer specific suggestions to help applicants design proposals for future competitions of the Recruitment of Superior Graduate Students Program.

Panel Comments, Recommendations and Suggestions:

1. Successful graduate programs generally have multiple sources of funding and the intent of the BoRSF Graduate Fellows Program is to supplement and enhance other sources of student support. Due to this intent and necessarily limited Board of Regents funding, the reality is that awards of more than three fellowships are unusual. Thoughtful proposals should address how only one or two fellowships will augment other funding streams and positively benefit the graduate program under review.
2. Applicants must complete the required tables correctly. Though data reporting has improved in most proposals, there continue to be mistakes, omissions, and misinterpretations of the data requested. These data are very important to the panel's understanding of graduate programs' strengths and challenges, so incomplete or error-filled data tables can have serious consequences in panel deliberations. Further, it is crucial that the tables are consistent and correct.
3. As noted above, the panel relies heavily on and carefully analyzes data submitted in the proposals. If data suggest problems with recruitment, retention, time to degree, minority participation, or other elements of a graduate program, the proposal should specifically address the problem(s) in the narrative and indicate what the program is doing or will do to respond. For example, if large numbers of students leave without the intended degree, explain this trend and the steps being taken to address the problem.
4. Recruitment plans that have been in place for many years and are not yielding results, particularly those related to increasing enrollment of underrepresented minority students, should be reevaluated. This panel sometimes sees the same proposals putting forth the same plans with the same results year after year and wonders why plans do not evolve or change, particularly when performance is stagnant or in decline. Convincing proposals will include an evaluation of what has worked, what has not and what concrete changes are proposed to address deficiencies.
5. The panel notes that the current section on Mentoring and Tracking is still not well addressed in most proposals. Proposals are enhanced by the inclusion of clear and systematic mentoring plans coupled with, but not replaced by, meaningful benchmarks and timelines for satisfactory progress. Descriptions of resources available to students who fall behind or fail to meet benchmarks should be included in addition to the statements describing penalties. If applicable, proposals should discuss how mentoring procedures put in place for Board of Regents fellowship recipients have impacted the quality of mentoring for all students in the graduate program. Many top-ranked institutions are not using Individual Development Plans (IDP). We recommend that programs familiarize themselves with this concept (myidp.sciencecareers.org).
6. Student outcomes following completion of the degree are an extremely important measure of a graduate program's success, and proposals are significantly enhanced by the inclusion of quantitative data on the placement of program graduates and other measures of success, such as publications and conference presentations. Though anecdotal evidence may be included, it should supplement comprehensive, systematically presented data.

7. Programs that have received fellowship funding for more than a few years should document how those fellowships have led to the recruitment of talented and diverse graduate students and enhanced the overall quality of programs. The panel recommends that two required subsections be added to each proposal. These should be entitled 1: impact of the fellowships on the program and 2: student outcomes. Applications with no or few past fellows should clearly identify the expected impact on the students and the program.
8. Economic development is a specific goal of the Board of Regents Support Fund and the Graduate Fellows Program. Most proposals can be improved by providing specific examples in addition to generalities in their descriptions of economic development success and/or potential. Applicants should also include information on how program curricula prepare students for non-academic careers.
9. Though the terms of BoRSF fellowships (two years for academic master's, three years for professional master's, and four years for doctoral studies) are insufficient for many students to complete their studies, most proposals do not address the issue of funding for fellowship recipients after Board support concludes. Proposals can be enhanced by including plans or pledges regarding the level and duration of support after BoRSF fellowship support is exhausted.
10. Though this has improved in recent years, the panel continues to note that a few proposals provide names and personal information for students in and graduates of programs seeking funding. **This practice is inappropriate and does not strengthen the proposal in any way.** Applicants are urged to maintain the anonymity of students.
11. Though ETS guidelines clearly state that use of composite GRE scores is a misuse of test results and the panel has for several years urged applicants to provide only the scores most relevant to the graduate program for which funding is sought, a handful of proposals continue to provide composite scores. ETS's most recent comments on use of scores may be found at http://www.ets.org/s/gre/pdf/gre_guide.pdf. As in several recent competitions, this year the use of combined scores resulted in substantially reduced scoring by the reviewers. In addition, it is no longer acceptable to give GRE scores by converting to the old scoring system. Nationwide, many programs now use percentiles.
12. There has been great improvement in proper use of the term "underrepresented minority". The panel still reminds applicants that Asian Americans and non-citizens who do not have permanent resident status are not to be categorized as underrepresented in this competition.
13. The panel recommends that, consistent with NIH and NSF definitions and practices, the definition of underrepresented minorities be expanded to include students with disabilities.
14. Applicants are strongly discouraged from including lengthy appendices, which are rarely used by the review panel because they are generally over-filled and difficult to navigate. Material should be provided in appendices only when it specifically illustrates or documents points made in the proposal narrative.

APPENDIX A

RECOMMENDATIONS FOR FUNDING

**LOUISIANA BOARD OF REGENTS SUPPORT FUND
TRADITIONAL GRADUATE FELLOWS AND GRADUATE FELLOWSHIPS FOR TEACHERS SUBPROGRAMS
FY 2014-15 CYCLE FOR AWARDS TO BEGIN IN FY 2016-17**

**TABLE I
PROPOSALS RECOMMENDED FOR FUNDING**

RANK	PROPOSAL NO.	INSTITUTION	DISCIPLINE	LENGTH/TYPE OF PROGRAM	NUMBER OF FELLOWSHIPS RECOMMENDED	ANNUAL STIPEND AMOUNT	YEAR	TOTAL BORSEF MONEY RECOMMENDED	CUMULATIVE AMOUNT OF 1ST YEAR AWARDS
1	003GF-16	LSU-BR	CHEMISTRY	4 YR. DOC	2	\$31,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 62,000 \$ 62,000 \$ 62,000 <u>\$ 62,000</u> \$248,000	\$62,000
2	018GF-16	TULANE	CHEMISTRY	4 YR. DOC	2	\$30,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 60,000 \$ 60,000 \$ 60,000 <u>\$ 60,000</u> \$240,000	\$122,000
3	017GF-16	TULANE	HEALTH & MEDICAL	4 YR. DOC	2	\$28,500	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 57,000 \$ 57,000 \$ 57,000 <u>\$ 57,000</u> \$228,000	\$179,000
4	009GF-16	LSU-BR	EARTH & ENVIRONMENTAL SCIENCES	4 YR. DOC 2 YR. MS	2 2	\$28,000 \$25,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$106,000 \$106,000 \$ 56,000 <u>\$ 56,000</u> \$324,000	\$285,000
5	019GF-16	TULANE	PHYSICS & ASTRONOMY	4 YR. DOC	2	\$30,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 60,000 \$ 60,000 \$ 60,000 <u>\$ 60,000</u> \$240,000	\$345,000
6	010GF-16	LSUHSC-NO	BIOLOGICAL SCIENCES	4 YR. DOC	1	\$28,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 28,000 \$ 28,000 \$ 28,000 <u>\$ 28,000</u> \$112,000	\$373,000
7	015GF-16	LA TECH	CHEMISTRY	4 YR. DOC	1	\$25,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 25,000 \$ 25,000 \$ 25,000 <u>\$ 25,000</u> \$100,000	\$398,000

RANK	PROPOSAL NO.	INSTITUTION	DISCIPLINE	LENGTH/TYPE OF PROGRAM	NUMBER OF FELLOWSHIPS RECOMMENDED	ANNUAL STIPEND AMOUNT	YEAR	TOTAL BORSF MONEY RECOMMENDED	CUMULATIVE AMOUNT OF 1ST YEAR AWARDS
8	024GF-16	UL LAFAYETTE	BIOLOGICAL SCIENCES	4 YR. DOC	2	\$30,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 60,000 \$ 60,000 \$ 60,000 <u>\$ 60,000</u> \$240,000	\$458,000
9	001GF-16	LSU-BR	MATHEMATICS	4 YR. DOC	2	\$30,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 60,000 \$ 60,000 \$ 60,000 <u>\$ 60,000</u> \$240,000	\$518,000
10	004GF-16	LSU-BR	BIOLOGICAL SCIENCES	4 YR. DOC	2	\$30,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 60,000 \$ 60,000 \$ 60,000 <u>\$ 60,000</u> \$240,000	\$578,000
11	002GF-16	LSU-BR	PHYSICS & ASTRONOMY	4 YR. DOC	1	\$30,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 30,000 \$ 30,000 \$ 30,000 <u>\$ 30,000</u> \$120,000	\$608,000
12	025GF-16	UL LAFAYETTE	ENGINEERING	4 YR. DOC	1	\$30,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 30,000 \$ 30,000 \$ 30,000 <u>\$ 30,000</u> \$120,000	\$638,000
13	008GF-16	LSU-BR	HEALTH & MEDICAL	4 YR. DOC	1	\$30,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 30,000 \$ 30,000 \$ 30,000 <u>\$ 30,000</u> \$120,000	\$668,000
14	005GF-16	LSU-BR	ENGINEERING	4 YR. DOC 2 YR. MS	1 1	\$30,000 \$20,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 50,000 \$ 50,000 \$ 30,000 <u>\$ 30,000</u> \$160,000	\$718,000
15	022GF-16	TUHSC	HEALTH & MEDICAL	4 YR. DOC	1	\$28,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 28,000 \$ 28,000 \$ 28,000 <u>\$ 28,000</u> \$112,000	\$746,000

RANK	PROPOSAL NO.	INSTITUTION	DISCIPLINE	LENGTH/TYPE OF PROGRAM	NUMBER OF FELLOWSHIPS RECOMMENDED	ANNUAL STIPEND AMOUNT	YEAR	TOTAL BORSF MONEY RECOMMENDED	CUMULATIVE AMOUNT OF 1 ST YEAR AWARDS
16	020GF-16	TULANE	ENGINEERING	4 YR. DOC	1	\$30,000	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 30,000 \$ 30,000 \$ 30,000 \$ 30,000 \$120,000	\$776,000
17	016GF-16	NICHOLLS	BIOLOGICAL SCIENCES	2 YR. MS	1	\$15,000	Year 1 Year 2 TOTAL	\$ 15,000 \$ 15,000 \$ 30,000	\$791,000
18	021GF-16	TUHSC	HEALTH & MEDICAL	4 YR. DOC	1	\$28,500	Year 1 Year 2 Year 3 Year 4 TOTAL	\$ 28,500 \$ 28,500 \$ 28,500 \$ 28,500 \$114,000	\$819,500
1	001GFT-16	LSU-BR	EDUCATION	1 YR. MASTER'S	4	\$20,000	Year 1 TOTAL	\$ 80,000 \$ 80,000	\$899,500

TABLE II
PROPOSALS NOT RECOMMENDED FOR FUNDING

PROPOSAL NO.	INSTITUTION	ELIGIBLE DISCIPLINE
006GF-16	LSU-BR	EDUCATION
007GF-16	LSU-BR	BUSINESS
011GF-16	LA TECH	MATHEMATICS
012GF-16	LA TECH	COMPUTER & INFORMATION SCIENCES
013GF-16	LA TECH	HEALTH & MEDICAL
023GF-16	UL LAFAYETTE	COMPUTER & INFORMATION SCIENCES
026GF-16	UL LAFAYETTE	EARTH & ENVIRONMENTAL SCIENCES
027GF-16	UL LAFAYETTE	MATHEMATICS
028GF-16	UL LAFAYETTE	PHYSICS & ASTRONOMY
029GF-16	UNO	BIOLOGICAL SCIENCES

TABLE III
PROPOSAL WITHDRAWN BY INSTITUTION

PROPOSAL NO.	INSTITUTION	ELIGIBLE DISCIPLINE
014GF-16	LA TECH	ENGINEERING

APPENDIX B

NARRATIVE ASSESSMENTS

**COMMENTS ON PROPOSALS SUBMITTED UNDER THE BOARD OF REGENTS
SUPPORT FUND SUBPROGRAMS FOR TRADITIONAL GRADUATE FELLOWS AND
GRADUATE FELLOWSHIPS FOR TEACHERS**

001GF-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE
“Recruitment of Superior Doctoral Students in Mathematics”
Requested: 4 Doctoral-Level Fellowships at \$30,000/annum for 4 years

Recommended: 2 Doctoral-Level Fellowships at \$30,000/annum for 4 years = \$240,000 TOTAL

The LSU Department of Mathematics has a strong faculty and a vigorous doctoral program. Time to degree is reported to be 5.7 years, which is typical of math programs. There has been a major improvement in the non-completion rate among BoRSF fellowship recipients, from a 32% drop rate in the 2004-08 cohort to only 17% in the past five years (Table 11-GF), addressing a major concern raised in past reviews. Recent recruiting classes have had outstanding credentials, boding well for the future of the program. Recruitment of minorities has also improved dramatically and it appears the department is committed to this important dimension of graduate training. The economic development argument is thoughtful, but focuses more on national than local impacts of the program. More information about interactions with local industries would be helpful. Funding is recommended for two four-year, doctoral-level fellowships at \$30,000 each per year.

002GF-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE
“Graduate Fellows in Physics and Astronomy”
Requested: 4 Doctoral-Level Fellowships at \$30,000/annum for 4 years

Recommended: 1 Doctoral-Level Fellowship at \$30,000/annum for 4 years = \$120,000 TOTAL

LSU's Physics Department is one of the largest and strongest on the campus, with good external grant support and long and successful history of graduate student training. The ratio of research assistants to teaching assistants indicates an adequate level of grant funding required to support the graduate programs. The PhD program is growing surprisingly rapidly, and the proposal claims this growth is occurring while maintaining high test scores and grade point averages of incoming students. This claim is difficult to confirm because of problems with the data tables. Table 3 (page 10) and 10-GF both include an average score of 825 for the quantitative GRE score, and Table 3 does not identify whose scores are reported. The drop rate is relatively low, but the time to degree seems on the long side (the proposal mentions 6.5 years) and BoRSF fellows may be taking even longer to graduate (Table 9-GF). The numbers in Table 11-GF appear not to be correct. The argument for the department's impact on the regional economy remains underdeveloped. Though one underrepresented minority student was admitted, minority recruitment remains inadequate. Once again, the panel notes that the use of combined GRE scores for student evaluation is inappropriate, particularly since it is clear that the department places little weight on the verbal score. It is also well past time for the department to start using the new GRE scale and stop converting to the old scale. Medical insurance is not paid by the department, which may make it more difficult to recruit the best students. The \$3,000 match for fellowship stipends is applauded. Funding is recommended for one four-year, doctoral-level fellowship at \$30,000 per year.

003GF-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE
“Graduate Fellowships in Chemistry for 2016”
Requested: 2 Doctoral-Level Fellowships at \$32,000/annum for 4 years

Recommended: 2 Doctoral-Level Fellowships at \$31,000/annum for 4 years = \$248,000 TOTAL

The Department of Chemistry at LSU has submitted a well-written, strongly argued request for PhD fellowship support. Overall the faculty appear to be committed to improving the program and building recruitment. Mentoring plans are strong, describing a range of programs to support professional development of the students. Evidently the institution as a whole is about to implement an Individual Development Plan (IDP) initiative, and clearly Chemistry is in the vanguard. Plans for recruiting are appropriate and are going well under a reorganized and more coherent strategy which seems to be yielding dividends. Selectivity and yield from recruiting are improving, and attrition is reasonable at approximately 25%. Underrepresented minority recruitment continues to be a strong aspect of the program, and currently attrition of minorities is on a par with majority students. The performance of BoR fellows is also worthy of note. The department has matriculated 14 fellows since 2006; three have graduated, and the remainder are still in the program. Time to degree overall is 5.7 years, which is reasonable, and the department is working to reduce it to the national average of 5.1 years. The panel had some concern about the level of faculty research funding, which appeared somewhat low to support this level of students. The requested stipend of \$32,000 per year is significantly higher than any other program's request, without providing sufficient supporting arguments. Funding is recommended for two four-year, doctoral-level fellowships at \$31,000 each per year.

004GF-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE
“Graduate Fellowships in Biological Sciences at Louisiana State University”
Requested: 4 Doctoral-Level Fellowships at \$30,000/annum for 4 years

Recommended: 2 Doctoral-Level Fellowships at \$30,000/annum for 4 years = \$240,000 TOTAL

The Department of Biological Sciences at LSU has 59 tenured and tenure-track faculty, of whom 45 are actively involved in research, some at a very high level. The faculty, then, are funded by a substantial amount of money, though it is unclear how much funding is earmarked for student support. The department admits approximately 25 students per year, with eight underrepresented minority students admitted over the last eight years. Overall attrition is 20% and average time to degree is 5.7 years, both reasonable levels. Around 50% of applicants are offered admission, with a subsequent yield close to 60%. About 40% of the students are international. Overall, then, the department appears to be in a healthy state. Performance of BoRSF fellows is comparable to the department as a whole: in the last seven years the department has recruited 12 fellows, of whom five have graduated and two have dropped. Time to degree averages 5.5 years. It is disappointing, however, that the number of underrepresented minority students recruited to BoRSF fellowships is so low, cited at 2% in the proposal. Recruiting in general and for underrepresented minority students in particular is very traditional and quite conservative in its approach. The proposal does note that the department needs to increase its number of underrepresented minority

faculty; success in this area should help recruiting, though is likely a long-term solution. Mentoring of students is clearly working as attrition is reasonable. It appears that students are largely recruited independently of the fellows program and the panel wonders if dramatically increasing the number of fellowships would make a difference. Funding is recommended for two four-year, doctoral-level fellowships at \$30,000 each per year.

005GF-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE

“Board of Regents Fellowships in Engineering 2016-2021”

Requested: 3 Doctoral-Level Fellowships at \$30,000/annum for 4 years

2 Master’s-Level Fellowships at \$20,000/annum for 2 years

Recommended: 1 Doctoral-Level Fellowship at \$30,000/annum for 4 years

1 Master’s-Level Fellowship at \$20,000/annum for 2 years

TOTAL: \$160,000

This is a college-wide proposal for the largest engineering program in Louisiana. Clearly the program is critical to the economic development of the State; but, surprisingly, little evidence is provided of the PhD and research programs’ impact on Louisiana’s economy. In spite of State funding difficulties, the college seems to be on an upward trajectory, with increasing undergraduate and graduate enrollments, a new building in development, and plans to hire 40 to 50 new faculty. This is essential for the program’s continued success, since the number of faculty is too small for its current size and could not sustain additional growth. The panel has two concerns: how will a small number of fellowships enhance the quality of seven programs? And how will the currently high attrition rate be addressed and corrected? The panel notes that retention is much higher for BoRSF fellows, so could this experience be translated to a broader group of students? The numerous programs in the college need more serious and comprehensive mentoring plans. Future proposals also should directly address the value of master’s students and explain why funding should extend to both levels of graduate study. Funding is recommended for one four-year, doctoral-level fellowship at \$30,000 per year and one two-year, master’s-level fellowship at \$20,000 per year.

006GF-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE

“Recruiting Highly Qualified PhD Candidates in Louisiana for Human Sciences and Education”

Requested: 12 Doctoral-Level Fellowships at \$25,000/annum for 4 years

Recommended: - 0 -

The LSU College of Human Sciences and Education is large and diverse, including six separate schools: the School of Education, the School of Human Resource Education and Workforce Development, the School of Kinesiology, the School of Library and Information Science, the School of Social Work, and the University Laboratory School. Collectively, these schools enroll almost 1,000 graduate students. There are more than 80 tenured, tenure-track and research faculty. The tables suggest that a substantial number of the faculty are active scholars; a small number have won competitive grants, though few that are national in scope. There are currently 265 PhD students in the college programs, more than 30% of

whom are underrepresented minorities. Admissions are somewhat selective and almost all admitted students enroll, undoubtedly reflecting the local focus of the program. The low average quantitative GRE scores do raise questions about the program's research quality; the heavy emphasis on course work in the program also suggests that research is not a focus for students. The college has an understandable desire to make the PhD programs more national in scope, but it is not clear from the proposal how the requested Board of Regents fellowships will achieve that goal. Assistantship stipends are very low. From the proposal it is difficult to understand what the emphasis or emphases of recruiting efforts might be. A future proposal might include a clearer description of the PhD programs involved and incorporate a strategy that engages institutional commitment as part of a broader effort to raise the profile of PhD programs. No funding is recommended.

007GF-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE
“Human Capital Research Fellows: Closing the Gap between Theory and Practice
in the Study of Human Capital”
Requested: 3 Doctoral-Level Fellowships at \$25,000/annum for 4 years

Recommended: - 0 -

This request from the Economics Department at LSU proposes recruiting PhD students in the area of human capital research, the focus of an initiative within the department, supported by a cluster of new faculty hires. The department is small but very research active; a number of members of the department have national profiles in the field. The evidence for external funding is unclear, but for the most part it seems to be short-term, project-aimed funding related to regional concerns. This points to the important role the department is playing in economic development, but also to a challenge if the department is to attract PhD students nationally. The number of the students in the program (25-30) has been limited by funds available for support. The program has struggled to attract U.S. applicants, which raises concerns regarding the Board of Regents fellowships, which may not be awarded to international students. The proposal does not include a detailed plan for building the pool of qualified applicants. The strategy for recruitment is rudimentary and there is little evidence of any systematic effort to recruit underrepresented minority applicants or mentor those students who might ultimately be admitted. No funding is recommended.

008GF-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE
“Graduate Studies in Infectious Disease”
Requested: 2 Doctoral-Level Fellowships at \$30,000/annum for 4 years

Recommended: 1 Doctoral-Level Fellowship at \$30,000/annum for 4 years = \$120,000 TOTAL

This is an application from the program in infectious diseases in the LSU School of Veterinary Medicine. This program has been developed from several previously existing departments within the school. The participating 27 faculty are well funded from a range of national sources. Currently the program consists of 32 PhD students of whom 22 are U.S. citizens. Over the last five years the program has recruited two underrepresented minority students. The proposal states that the program's time to degree is 5.2 years; however Table 11-GF shows that the program is currently graduating about four students per year from

the total 32 listed. This would suggest that the time to degree is closer to seven years. Of course these are small numbers and the addition of one student to the list can change the time to degree calculation dramatically. Recruitment has been relatively local and the proposal recognizes that the program must make extra efforts to improve the pool of applicants. The mentoring approach is relatively conventional except for the introduction of the “Assessment Matrices.” This is in principle a reasonable idea, along the path of the Independent Development Plans (IDP) model. The IDP model available on the AAAS website is better thought through than this assessment, and should be consulted immediately as a possible replacement. Funding is recommended for one four-year, doctoral-level fellowship at \$30,000 per year.

009GF-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE
“Recruitment of Superior Graduate Students in Earth, Ocean, and Environmental Sciences”
Requested: 2 Doctoral-Level Fellowships at \$28,000/annum for 4 years
4 Master’s-Level Fellowships at \$25,000/annum for 2 years

Recommended: 2 Doctoral-Level Fellowships at \$28,000/annum for 4 years
2 Master’s-Level Fellowships at \$25,000/annum for 2 years
TOTAL: \$324,000

The graduate programs of the Departments of Oceanography and Coastal Sciences, Geology and Geophysics, and Environmental Sciences at LSU have an excellent opportunity to translate research opportunities related to Louisiana’s coastal environment into an enhanced national reputation for leadership in research related to environmentally sustainable economic growth. The recent establishment of a Coastal Studies Institute at LSU has provided additional opportunities for linkages across academic programs in the different departments and for interdisciplinary research. There is a strong connection between the research and training occurring in these departments and Louisiana’s economic development. Each of the three departments offers both a master’s program and the PhD. There is a combined faculty of 56, who collectively have impressive records in scholarship and external funding: there is currently \$20 million in active research funding across the three departments, focusing in both basic and applied research areas. The programs have remained selective even as the doctoral and master’s programs have grown. Minority enrollments remain persistently low, though the proposal makes clear that the departments individually have attempted various strategies to correct that. Although the master’s programs presumably play important roles in meeting regional workforce needs, the proposal does not make an effective case for support for master’s students. Regents fellowships should be part of a comprehensive, integrated plan to attract a larger and more diverse pool of qualified applicants. Funding is recommended for two four-year, doctoral-level fellowships at \$28,000 per year and two two-year, master’s-level fellowships at \$25,000 per year.

010GF-16 LSU HEALTH SCIENCES CENTER – NEW ORLEANS
“Graduate Training in Integrative Pharmacological Sciences”
Requested: 2 Doctoral-Level Fellowships at \$28,000/annum for 4 years

Recommended: 1 Doctoral-Level Fellowship at \$28,000/annum for 4 years = \$112,000 TOTAL

This is a small but very solid PhD program in integrative pharmacology that involves approximately 20 faculty. Of those who are research active, a substantial number have funding. There are currently 18 students, only a small number of whom are international. The program has made serious efforts to recruit minority students and has had some success. Especially commendable are the longer-term efforts to build linkages with regional undergraduate institutions and in particular the plan to mentor UNO master’s students at the thesis stage. Students are closely mentored and completion rates are high, including for previous Regents fellows. A good case is made for the economic significance of the program and, in larger terms, the economic impact of the LSU Health Sciences Center, in part through efforts to attract industrial partners and promote commercialization. The applicant pool is small, though the students are of high quality. More effort could be made to demonstrate how these fellowships promote high levels of selectivity and leverage more minority applicants. Funding is recommended for one four-year, doctoral-level fellowship at \$28,000 per year.

011GF-16 LOUISIANA TECH UNIVERSITY
“Superior Graduate Fellows in Mathematics and Statistics”
Requested: 2 Master’s-Level Fellowships at \$20,000/annum for 2 years

Recommended: - 0 -

This is one of 12 master’s programs offered by Louisiana Tech’s College of Engineering and Science. The students seem to be of high quality and, like many master’s programs, most students are self-supporting. One puzzle in the proposal is that the data submitted show many more students graduating from this program than have matriculated (see Tables 10-GF and 11-GF). Table 11-GF indicates that no students have dropped from the program in the last six years, which seems highly unlikely and worthy of comment in the proposal narrative. The tables also disagree on the number of minority students enrolled. These and other inconsistencies in the data make it difficult for the panel to assess the state of the program. Most of the program faculty also belong to one of the four PhD programs offered by the college, several of which have also submitted proposals in this competition. No case is made for why Board of Regents funding would be better directed to this program than to one of the PhD programs and the proposal could make a stronger case for the benefit of highly trained master’s students to the Louisiana economy. No funding is recommended.

012GF-16 LOUISIANA TECH UNIVERSITY
“Computational Analysis and Modeling Doctoral Graduate Fellows 2016-2020”
Requested: 2 Doctoral-Level Fellowships at \$25,000/annum for 4 years

Recommended: - 0 -

Computational Analysis and Modeling (CAM) is one of four PhD programs in the College of Engineering and Science at Louisiana Tech. Most research occurs in four “centers of excellence.” The innovative administrative structure of the university means that all graduate programs in the sciences and engineering are interdisciplinary, which makes it easier to develop interdisciplinary research projects. This is a real advantage. The program seems to do a remarkable job with the limited resources provided by the State. The well-documented impact on economic development describes activities of the college as a whole rather than being limited to CAM, but clearly CAM faculty are actively involved in economic development activities. There has been a modest decline in the size of the PhD program in recent years, but this may be a positive development as it brings program size in line with funding. The panel notes that the number of students funded on research projects now nearly equals the number of teaching assistants, which is a step in the right direction. The small size of the application pool is disappointing. The panel notes a discrepancy between the high GRE scores of the newly matriculated students and a line in the text (p.13) indicating that a GRE Quantitative score of 150 is “high.” The number of minority students is down this year, a trend it is hoped can be reversed in the near future. The lack of U.S. GRE score and GPA data is viewed by the panel as a serious omission and the proposal would have been significantly strengthened by a program-specific mentoring plan. The \$5,000 supplement is a very positive feature of the proposal, but not sufficient to offset panel concerns. No funding is recommended.

013GF-16 LOUISIANA TECH UNIVERSITY
“Graduate Fellows in Biomedical Engineering 2015-20”
Requested: 2 Doctoral-Level Fellowships at \$25,000/annum for 4 years

Recommended: - 0 -

This proposal from Biomedical Engineering at Louisiana Tech requests support for two BoRSF fellowships. This is a very small program with 15 faculty members, of whom five are externally funded. Currently the program matriculates an average of three students per year (15 over the last five years). The student group is more than 50% international, so the number of students eligible for Regents fellowship support is about eight. Over the last five years the program has been awarded ten BoRSF fellowships, leading to the assumption that BoRSF fellowships support the majority of the program’s U.S. citizen student body. This raises a question about the purpose of the BoRSF program, which is specifically to help departments achieve their goals of increasing the number and excellence of their student body. It is clear from this proposal that U.S. student participation has not grown as a result of this investment and that competition for these awards is lacking. The details of the program and mentoring plans are conservative, suggesting that even with this support the program has continued to take a highly traditional approach to graduate education, which is unlikely to lead to increases in program size and quality. No funding is recommended.

015GF-16 LOUISIANA TECH UNIVERSITY

“Superior Graduate Fellows in Molecular Sciences and Nanotechnology 2015-20”

Requested: 2 Doctoral-Level Fellowships at \$25,000/annum for 4 years

Recommended: 1 Doctoral-Level Fellowship at \$25,000/annum for 4 years = \$100,000 TOTAL

The new PhD program in Molecular Science and Nanotechnology, which has been in operation for three years, requests support for two fellowships. This program, which has evolved within the College of Engineering and Science and the College of Liberal Arts, has 34 affiliated faculty and aggregated support in excess of \$55 million. This figure appears to reflect a comprehensive rather than an annual total of award amounts, and it was unclear how much of the research support devolved upon the specific 34 faculty members listed in this proposal. The application pool is not very deep, though the newness of the program may be a contributing factor. Nevertheless, this leads to reservations about the program's continuing selectivity and yield, which are currently acceptable. Proposed activities to improve recruiting are well formulated and should, if implemented as planned, lead to increased applications and selectivity. Mentoring activities have yet to be fully developed and at present consist primarily of ensuring that milestones are met. To help the program become established and attract superior students, funding is recommended for one four-year, doctoral-level fellowship at \$25,000 per year.

016GF-16 NICHOLLS STATE UNIVERSITY

“Enhancement of Marine and Environmental Biology Student Recruitment through Graduate Study”

Requested: 3 Master's-Level Fellowships at \$15,000/annum for 2 years

Recommended: 1 Master's-Level Fellowship at \$15,000/annum for 2 years = \$30,000 TOTAL

Nicholls State University offers a well-regarded, regionally focused master's program in marine and environmental biology that has over the last six years increased in enrollment from ten to 29 students. The department has successfully leveraged the proximity to the Barataria-Terrebonne National Estuary and links to regional industries, including sugar, oil, and fishing, and regional research facilities, to build a high-quality research and training program. Students in the master's program engage in a range of research projects addressing local environmental, ecological, and commercial issues. A substantial number of the faculty are active researchers and some have attracted significant funding. A much stronger case could be made for the impact of the program on economic development, including the roles that graduates have played in the State economy. Attrition continues to be a serious problem, and the department should consider instituting a more comprehensive and intrusive approach to tracking and mentoring. Although the department has had considerably success with recruitment there are currently no underrepresented minority students and no concerted plan to change that situation. Funding is recommended for one two-year, master's-level fellowship at \$15,000 per year.

017GF-16 TULANE UNIVERSITY

“Superior Graduate Students in Neuroscience / 2016-2021”

Requested: 2 Doctoral-Level Fellowships at \$28,500/annum for 4 years

Recommended: 2 Doctoral-Level Fellowships at \$28,500/annum for 4 years = \$228,000 TOTAL

Tulane’s neuroscience program is the oldest, biggest and most successful interdepartmental program at the university. The Board of Regents has supported 31 Neuroscience PhD students over the years and is currently supporting six of the 25 enrolled. The program has 33 faculty and the university provides nine teaching assistants. A major positive element is the funding stream from the master’s program. The research support for program students has greatly improved over the past few years. The panel recognizes that an increasing fraction of the research mentors have external funding, a laudable trend. The panel also applauds the plan to submit an NIH training grant in 2015. This has been a long time coming. Two of 25 students are categorized as being minority, one having graduated last year; this is good but not exceptional. The recruitment plan is first rate and it is notable that the number of applications has gradually increased from 30 to 40 over the past six years. This may be a sign of a growing reputation. The program seems to be reinvigorated following Tulane’s rebuilding after Hurricane Katrina and is functioning well. The future looks bright. Funding is recommended for two four-year, doctoral-level fellowships at \$28,500 per year.

018GF-16 TULANE UNIVERSITY

“Recruitment of Superior Graduate Students in Chemistry”

Requested: 3 Doctoral-Level Fellowships at \$30,000/annum for 4 years

Recommended: 2 Doctoral-Level Fellowships at \$30,000/annum for 4 years = \$240,000 TOTAL

This is a proposal for three BoRSF fellowships from the Chemistry Department at Tulane. The department currently has 15 faculty members, many funded by support from a range of national agencies and who have collectively published over 400 papers since 2010. This demonstrates a very active research environment. In addition, the proposal notes positive outcomes for BoRSF fellows over the last decade, with minimal attrition and regular graduation. The department also indicates that it has consistently planned to include at least one underrepresented minority student in the fellows group each year. Table 9-GF did not include the requested breakdown of fellowship recipients, so it was not possible to see whether this plan has come to fruition. The applicant pool of approximately 100 students is more than 50% international. With reasonable selectivity and yield, about a dozen new students matriculate each year. Of these, around seven students graduate per year. Over the last five years, 40 students have graduated, including three underrepresented minorities, and nine have dropped. Attrition then calculates at 25%, which is reasonable though higher than for BoRSF fellows. An average seven students graduating per year out of a population of 60 students in their program suggests a moderately long time to degree, though calculation of this key metric was not clearly presented in the proposal. Recruiting has clearly been the primary focus of this program, though the mentoring arrangements seem to assure that students are being appropriately monitored. A more tangible student support system might be helpful. Funding is recommended for two four-year, doctoral-level fellowships at \$30,000 each per year.

019GF-16 TULANE UNIVERSITY

“Graduate Fellowships in Physics 2016-2021”

Requested: 2 Doctoral-Level Fellowships at \$30,000/annum for 4 years

Recommended: 2 Doctoral-Level Fellowships at \$30,000/annum for 4 years = \$240,000 TOTAL

This small department is in the process of rebuilding with a new emphasis on materials. Five of eleven faculty members are assistant professors. Economic development activities are quite strong, with three faculty research programs demonstrating a direct impact on the local economy. The most serious problem is broad-based research funding. Only six total faculty members – and one of five assistant professors – currently have external funding. This likely explains why over half of the students are supported by teaching assistantships, and may underlie the relatively long average time to degree. Recruiting has improved steadily over the past six years, and 22 domestic applications were received this past year; recruitment of underrepresented minorities and women, however, has not kept pace. The program has only four women and no minority students enrolled. The proposal suggests this is an active concern and cites various programs in place to address it, though the panel wonders whether these programs are active. Dual degree programs with Xavier, Dillard and Loyola should provide a marvelous opportunity for recruiting minority students, though so far no success has been registered. The drop rate, about one per year, is acceptable. Given that the most serious problem facing the program is non-teaching assistantship student funding. BoRSF fellowships would greatly benefit this program. Funding is recommended for two four-year, doctoral-level fellowships at \$30,000 each per year.

020GF-16 TULANE UNIVERSITY

“Enabling the Future: Graduate Fellowships for Biomedical and Chemical & Biomolecular Engineering”

Requested: 4 Doctoral-Level Fellowships at \$30,000/annum for 4 years

Recommended: 1 Doctoral-Level Fellowship at \$30,000/annum for 4 years = \$120,000 TOTAL

Tulane’s Engineering programs are relatively small, with 22 faculty members reflecting a merging of training in biomedical and chemical and biomolecular engineering. The faculty are reasonably well supported with national funding. The programs attract about 42 U.S. applicants and a small number of international students each year. In recent years typically 20 U.S. students, including seven underrepresented minorities, are selected, along with 14 international students. An average of 14 students matriculate, split evenly between domestic and international. Over the past six years 49 students (16 U.S.) have graduated, while 16 have dropped. Recruiting and mentoring are straightforward and traditional. Mentoring is largely a list of timelines, though the proposal notes “we are actively seeking mentors from the alumni of the departments to ensure that all of our women and URM students have external career mentors throughout their Tulane degree.” This is a good idea, which should have been implemented sooner. Results for BoRSF fellows are reasonable: 14 fellowships over the past eight years have yielded 6 graduations, 3 drops, and 5 students still in the programs. Funding is recommended for one four-year, doctoral-level fellowship at \$30,000 per year.

021GF-16 TULANE UNIVERSITY HEALTH SCIENCES CENTER
“Predoctoral Training in Biomedical Sciences”
Requested: 4 Doctoral-Level Fellowships at \$28,500/annum for 4 years

Recommended: 1 Doctoral-Level Fellowship at \$28,500/annum for 4 years = \$114,000 TOTAL

This is a proposal from six departments and programs in the biomedical sciences at the Tulane University Health Sciences Center, which have been recruiting and working together for about six years. Overall, this combined effort seems to have been a successful endeavor. The attrition in the programs is low, the time to degree is around five years and the proposal cites plans to reduce this time further. Selectivity and yield are good. The recruiting seems to be working fairly well, though Table 10-GF indicates that minority recruiting seems to have peaked despite the attention paid to it in the proposal. In addition, mentoring is very conventional and seems to focus primarily on addressing deficiencies rather than positive student support. A more open admission policy to raise enrollment of underrepresented minority students, followed by a much greater attention to mentoring and support, might help to address both issues. The panel also has concerns about how BoRSF fellowships impact so large a program. Documentation of this should be included in future proposals. The recycling of the narrative from previous years’ proposals without appropriate updating or editing raises questions about how attentive the program is to details. Funding is recommended for one four-year, doctoral-level fellowship at \$28,500 per year.

022GF-16 TULANE UNIVERSITY HEALTH SCIENCES CENTER
“Social Determinants of Violence Prevention: A Public Health Approach Doctoral Training Fellowship Program, Tulane University School of Public Health & Tropical Medicine”
Requested: 6 Doctoral-Level Fellowships at \$28,000/annum for 4 years

Recommended: 1 Doctoral-Level Fellowship at \$28,000/annum for 4 years = \$112,000 TOTAL

This is a very small program combining the interests of Public Health and Tropical Medicine at Tulane. The number of graduates is in the single digits, the number of applicants is small, and selectivity and yield are low. The program, though small, has shown some success: attrition is admirably low and the time to degree, though hard to ascertain from the data provided, seems to be within reasonable bounds. Minority recruiting is spotty, but the small numbers make it difficult to discern any larger meaning. Given the small size of the program, the request for six fellowships is unrealistic. Moreover, the idea that the Board of Regents should support a full cohort of students is outside of typical funding patterns and an approach not likely to achieve the goals of the Graduate Fellows program. Funding is recommended for one four-year, doctoral-level fellowship at \$28,000 per year.

023GF-16 UNIVERSITY OF LOUISIANA AT LAFAYETTE
“Recruitment of Superior Graduate Students in Computer Science”
Requested: 2 Doctoral-Level Fellowships at \$27,000/annum for 4 years

Recommended: - 0 -

At the University of Louisiana at Lafayette, computer science and computer engineering degrees are administered under the Center for Advanced Computer Studies umbrella. The two programs together have 16 faculty and 75 PhD students. In each of the last several GF competitions, the review panel has noted that the data tables and data provided are inconsistently and incorrectly presented, and the applicants have not addressed this deficiency. As a result, it continues to be difficult for the panel to get a clear picture of the PhD program. For example, over the past six years 93 students are reported to have graduated or left the program without a PhD, while over this same period only 39 new matriculations are reported, yet the program has not diminished in size. Given that data presented for past BoRSF fellows show that fellows admitted in 2003 and 2006 are still in the program, the panel is concerned about the time to degree but because of the inconsistent data cannot determine whether there is an issue. The pool size and quality of U.S. applicants seem to be problems; the last two U.S. students admitted had very low GPAs and disappointing GRE scores. As has been noted previously, 75 PhD students seems to be a very high number for 16 faculty members who also direct master's students. Only 42 PhD students, a much more reasonable number, are listed as being mentored in table 12-GF, but there is no way to align this with enrollment numbers reported elsewhere. The economic development activities of the department seem to be very strong, showing many interactions with local businesses. There are no underrepresented minority students in the doctoral program, indicating a lack of commitment to this important dimension of graduate education. No funding is recommended.

024GF-16 UNIVERSITY OF LOUISIANA AT LAFAYETTE
“Recruiting Superior PhD Students in Environmental and Evolutionary Biology for 2016”
Requested: 3 Doctoral-Level Fellowships at \$30,000/annum for 4 years

Recommended: 2 Doctoral-Level Fellowships at \$30,000/annum for 4 years = \$240,000 TOTAL

The environmental and evolutionary biology program at the University of Louisiana at Lafayette serves a very large number of undergraduate majors and also has a research-active faculty with impressive records of basic and applied research. More than half of the research faculty have significant competitive federal funding. The program appears to have done a good job in distributing PhD students among the faculty. The proposal makes a strong case for the economic impact of the research that is undertaken in the department and shows evidence that the department has been strategic in hiring faculty whose scholarship will align with State needs and the opportunities those present. Close collaborations with federal and State regional research centers and with industry represent an important asset. The PhD program has remained steady for a number of years; and the evidence presented indicates that there is growing selectivity in admissions. Recently, the department developed a recruitment plan and there is evidence that efforts have been made to experiment with innovative approaches and assess them. A strong case is made for the important role that Regents fellowships can make in recruitment. The department has paid serious

attention to the goal of recruiting African American and other underrepresented minority students and has had some success. There is a persistent concern regarding time to degree (including among Regents fellows) and in particular high levels of attrition. Although the proposal argues that these have declined, there is little indication of concerted efforts to identify the causes and to address them systematically through admissions, tracking, and mentoring. Funding is recommended for two four-year, doctoral-level fellowships at \$30,000 each per year.

025GF-16 UNIVERSITY OF LOUISIANA AT LAFAYETTE
“Recruiting Superior Ph.D. Students in Emerging Research Areas of Systems Engineering”
Requested: 6 Doctoral-Level Fellowships at \$30,000/annum for 4 years

Recommended: 1 Doctoral-Level Fellowship at \$30,000/annum for 4 years = \$120,000 TOTAL

The PhD program in systems engineering first enrolled students in 2011. The program has been planned to focus on “design-based problem solving” closely linked to research questions associated with industry, and each dissertation committee will include an industry representative. The dissertations themselves must follow the Six Sigma standard and each must include a commercialization chapter. The approach is innovative and the reorientation of engineering curriculum, outreach, and recruitment has already resulted in sharply increased numbers of undergraduate students. It is too soon to assess the success of the PhD program: there are about 28 students currently in the program, nine of whom are U.S. students. Only one underrepresented minority student is enrolled (in future the program should avoid referring to some international students as “minorities”), although the program has had some success in attracting underrepresented minority applicants. The students appear well qualified, but the applicant pools (especially for U.S. students) are relatively small. The program apparently lost several students through faculty departures, in itself a cause for concern. The suggestion in the proposal that there may be insufficient faculty to support the program also raises questions about its ongoing health and ability to grow. The core faculty have strong publication records and a number have been successful in attracting external funding. The proposal makes reference to the challenges represented by insufficient funding: the program stipend level is very low and the available funds limit the number of assistantships that can be offered. About half of the students are supported by external funds, but no strategy is described for increasing that proportion. Finally, the proposal does not really explain how the program will leverage the Regents fellowships to attract high-quality U.S. applicants. Funding is recommended for one four-year, doctoral-level fellowship at \$30,000 per year.

026GF-16 UNIVERSITY OF LOUISIANA AT LAFAYETTE
“Master’s Level Graduate Fellowships in Geology at the University of Louisiana at Lafayette”
Requested: 2 Master’s-Level Fellowships at \$21,000/annum for 2 years

Recommended: - 0 -

The master’s level geology program at the University of Louisiana at Lafayette has recently consolidated and considerably expanded its faculty. The program, appropriately, focuses on preparing graduates for

careers in the petroleum industry and has experienced remarkable growth in recent years. The numbers of students have doubled since 2008: there are now 62 students enrolled, almost all of whom are U.S. nationals. From the proposal it is not clear how this occurred, but the program has been quite successful in attracting rapidly growing numbers of applications. Admissions are selective and the quality of those enrolling (at least as measured by GRE scores) seems to be increasing. The proposal notes that the department is planning a PhD offering, although the faculty is relatively small to accommodate this, with nine research-active members, a smaller number of whom have successfully competed for external funding. At present very few of the students receive support and attrition is quite high. Presumably a number of students are leaving the program for positions in industry. Especially given the low level of stipends, this is understandable, but the program should document this and present a strategy for assisting such students in completing their degrees. It is also not clear what the strategy is for leveraging Regents fellowships in relationship to developing the future of the program and department. No funding is recommended.

027GF-16 UNIVERSITY OF LOUISIANA AT LAFAYETTE
“Recruitment of Superior Graduate Students in Mathematics for PhD Program”
Requested: 3 Doctoral-Level Fellowships at \$28,500/annum for 4 years

Recommended: - 0 -

The University of Louisiana at Lafayette’s Mathematics Department is relatively large and struggles to recruit and support high-quality PhD students, often with minimal stipends. The departmental minimums for quantitative GRE and the GPAs of recent matriculants are very low. The talent level of admitted students may partially explain the very high drop-out rate. The ratio of graduations to students leaving the program without the doctoral degree is 25 to 40. The narrative briefly suggests that some of the “drop-outs” are leaving with a master’s degree; this would reflect more positively on the high attrition rate, but is not documented. The program does a good job recruiting women and a fair job recruiting underrepresented minorities. The faculty are very active in publishing, but only two have external funding and only one PhD student was supported on grant funds last year. The economic development argument is weak, with no active collaborations mentioned with local industry or regional federal laboratories. In summary, though the program would benefit from three high-quality graduate students, the impact of such students on the overall reputation of the program and the benefit of the program to Louisiana would be minimal. No funding is recommended.

028GF-16 UNIVERSITY OF LOUISIANA AT LAFAYETTE
“Recruitment of Superior Physics Graduate Students”
Requested: 2 Master’s-Level Fellowships at \$18,000/annum for 2 years

Recommended: - 0 -

This is a very small program which has successfully offered the master of science degree since 1958. In the previous year five of six students were supported on teaching assistantships and most faculty do not have regular grant support. Some students (the number is not given) are supported in the summer at national labs or through other opportunities. The data provided suggest that graduates get jobs or go on to

PhD programs. Admissions and enrollment data given are difficult to interpret. The number of newly enrolled students shown in Table 10-GF is not consistent with the number of continuing and graduating students shown in Table 11-GF; also, the number of minority students shown in Table 11-GF part A does not match the data given in Table 11-GF part B. The data given indicate a very low drop rate, but given the uncertainties in the table data the reviewers are uncertain if these are reported correctly. The application pool seems adequate to support the program, particularly if recruiting is improved. The proposal could be strengthened by articulating how this program benefits Louisiana and how one or two fellowships would strengthen the program. No funding is recommended.

029GF-16 UNIVERSITY OF NEW ORLEANS
“Graduate Fellowships in Integrative Biology at the University of New Orleans”
Requested: 1 Doctoral-Level Fellowship at \$28,000/annum for 4 years

Recommended: - 0 -

The PhD program in integrative biology at the University of New Orleans involves a small but research-active faculty of twelve tenured and tenure-track members, with limited external funding. A number are recent hires, indicating the possibility of expanded research activity in the near future. The shift in the program focus to integrative biology in 2012 provides the opportunity for much wider faculty participation in the PhD program in a department that is much reduced in size compared to the period before Hurricane Katrina. In conjunction with an active master’s program, the doctoral program offers solid training, and graduates have found appropriate placements, including in settings that contribute to the economic development of the State. The department has clearly taken steps to address concerns raised in the past and has developed a serious recruiting plan. There has been considerable success in attracting underrepresented minority students to the program – currently four of 17 students (14 of whom are U.S. students) are minority. The recent effort to recruit UNO bachelor’s and master’s students to the PhD has apparently been somewhat successful, and the Howard Hughes and NSF-funded program linking UNO and Southern University at New Orleans may well, together with other collaborative projects and institutional linkages, expand the pipeline of students interested in the doctoral program. It does remain a serious question, however, whether a program of this size is sustainable, given the very small numbers of applicants and the small numbers graduating. The proposal does not make a persuasive case that the award of a Regents fellowship could change that situation. No funding is recommended.

001GFT-16 LOUISIANA STATE UNIVERSITY AND A&M COLLEGE
“Improving Classroom Interest in Science and Mathematics by Preparing Highly Qualified Teachers”
Requested: 6 Master’s-Level Fellowships at \$20,000/annum for 1 year

Recommended: 4 Master’s-Level Fellowships at \$20,000/annum for 1 year = \$80,000 TOTAL

This is a request from LSU’s Holmes Program for six one-year fellowships in mathematics and science teaching. The program’s previous history of teacher training is very good and, per the data submitted, fellowships funded by the Board of Regents have been well used. All awarded fellowships have been filled and all recipients have graduated from the program. The approaches and strategies for student

success are well thought out and carefully documented and evaluated. In reading the proposal's description of the assessment vehicle, the panel was struck by the care and thoroughness with which the faculty approaches program goals. Coursework and expectations are on target. Recruitment continues to be an issue, but the program is working hard to address it. Though the overarching goal – to provide more high-quality and prepared teachers for Louisiana's K-12 classrooms – is worthy, it is always a concern that this program cannot generate enough teachers to meet the extensive need. Diversity is good at 21%. Funding is recommended for four one-year master's fellowships at \$20,000 each.

APPENDIX C

LISTS OF PROPOSALS SUBMITTED

**Traditional Graduate Fellows Program
2014-15 Competition
Proposals Submitted**

Proposal#/ Discipline	PI Name(s)	Institution	Proposal Title	Duration	Funds Requested
001GF-16 MATH	William Adkins	LSU-Baton Rouge	Recruitment of Superior Doctoral Students in Mathematics	4 years 4 PhD @ \$30K	Y1: \$120,000 Y2: \$120,000 Y3: \$120,000 <u>Y4: \$120,000</u> Total: \$480,000
002GF-16 PHYS	Dana Browne	LSU-Baton Rouge	Graduate Fellows in Physics and Astronomy	4 years 4 PhD @ \$30K	Y1: \$108,000 Y2: \$108,000 Y3: \$108,000 <u>Y4: \$108,000</u> Total: \$432,000
003GF-16 CHEM	Samuel Gilman	LSU-Baton Rouge	Graduate Fellowships in Chemistry for 2016	4 years 2 PhD @ \$32K	Y1: \$64,000 Y2: \$64,000 Y3: \$64,000 <u>Y4: \$64,000</u> Total: \$256,000
004GF-16 BIO	Michael Hellberg	LSU-Baton Rouge	Graduate Fellowships in Biological Sciences at Louisiana State University	4 years 4 PhD @ \$30K	Y1: \$120,000 Y2: \$120,000 Y3: \$120,000 <u>Y4: \$120,000</u> Total: \$480,000
005GF-16 ENG	Sherif Ishak	LSU-Baton Rouge	Board of Regents Fellowships in Engineering 2016-2021	4 years/2 years 3 PhD @ \$30K 2 MS @ \$20K	Y1: \$110,000 Y2: \$130,000 Y3: \$110,000 <u>Y4: \$ 90,000</u> Total: \$440,000

006GF-16 EDU	Roland Mitchell	LSU-Baton Rouge	Recruiting Highly Qualified PhD Candidates in Louisiana for Human Sciences and Education	4 years 12 PhD @ \$25K	Y1: \$300,000 Y2: \$300,000 Y3: \$300,000 <u>Y4: \$300,000</u> Total: \$1,200,000
007GF-16 BUS	Dek Terrell	LSU-Baton Rouge	Human Capital Research Fellows: Closing the Gap between Theory and Practice in the Study of Human Capital	4 years 3 PhD @ \$25K	Y1: \$75,000 Y2: \$75,000 Y3: \$75,000 <u>Y4: \$75,000</u> Total: \$300,000
008GF-16 HM	Ronald Thune	LSU-Baton Rouge	Graduate Studies in Infectious Disease	4 years 2 PhD @ \$30K	Y1: \$60,000 Y2: \$60,000 Y3: \$60,000 <u>Y4: \$60,000</u> Total: \$240,000
009GF-16 EARTH	R. Eugene Turner	LSU-Baton Rouge	Recruitment of Superior Graduate Students in Earth, Ocean and Environmental Sciences	4 years/2 years 2 PhD @ \$28K 4 MS @ \$25K	Y1: \$106,000 Y2: \$106,000 Y3: \$106,000 <u>Y4: \$106,000</u> Total: \$424,000
010GF-16 BIO	Andrew Catling	LSUHSC-NO	Graduate Training in Integrative Pharmacological Sciences	4 years 2 PhD @ \$28K	Y1: \$56,000 Y2: \$56,000 Y3: \$56,000 <u>Y4: \$56,000</u> Total: \$224,000
011GF-16 MATH	Dexter Cahoy	LA Tech University	Superior Graduate Fellows in Mathematics and Statistics	2 years 2 MS @ \$20K	Y1: \$40,000 <u>Y2: \$40,000</u> Total: \$80,000

012GF-16 CIS	Weizhong Dai	LA Tech University	Computational Analysis and Modeling Doctoral Graduate Fellows 2016-20	4 years 2 PhD @ \$25K	Y1: \$50,000 Y2: \$50,000 Y3: \$50,000 <u>Y4: \$50,000</u> Total: \$200,000
013GF-16 HM	Steven Jones	LA Tech University	Graduate Fellows in Biomedical Engineering 2015-20	4 years 2 PhD @ \$25K	Y1: \$50,000 Y2: \$50,000 Y3: \$50,000 <u>Y4: \$50,000</u> Total: \$200,000
014GF-16 ENG WITHDRAWN	James Palmer	LA Tech University	Superior Graduate Fellows Supporting Five Centers of Excellence in Engineering FY 2015-20	4 years 4 PhD @ \$25K	Y1: \$100,000 Y2: \$100,000 Y3: \$100,000 <u>Y4: \$100,000</u> Total: \$400,000
015GF-16 CHEM	Bala Ramachandran	LA Tech University	Superior Graduate Fellows in Molecular Sciences and Nanotechnology 2015- 2020	4 years 2 PhD @ \$25K	Y1: \$50,000 Y2: \$50,000 Y3: \$50,000 <u>Y4: \$50,000</u> Total: \$200,000
016GF-16 BIO	Aaron Pierce	Nicholls State University	Enhancement of Marine and Environmental Biology Student Recruitment through Graduate Study	2 years 3 MS @ \$15K	Y1: \$45,000 <u>Y2: \$45,000</u> Total: \$90,000
017GF-16 HM	Jill Daniel	Tulane University	Superior Graduate Students in Neuroscience / 2016-2021	4 years 2 PhD @ \$28.5K	Y1: \$57,000 Y2: \$57,000 Y3: \$57,000 <u>Y4: \$57,000</u> Total: \$228,000

018GF-16 CHEM	Brent Koplitz	Tulane University	Recruitment of Superior Graduate Students in Chemistry	4 years 3 PhD @ \$30K	Y1: \$90,000 Y2: \$90,000 Y3: \$90,000 <u>Y4: \$90,000</u> Total: \$360,000
019GF-16 PHYS	Jerry Shakov	Tulane University	Graduate Fellowships in Physics 2016-2021	4 years 2 PhD @ \$30K	Y1: \$60,000 Y2: \$60,000 Y3: \$60,000 <u>Y4: \$60,000</u> Total: \$240,000
020GF-16 ENG	Daniel Shantz	Tulane University	Enabling the Future: Graduate Fellowships for Biomedical and Chemical & Biomolecular Engineering	4 years 4 PhD @ \$30K	Y1: \$120,000 Y2: \$120,000 Y3: \$120,000 <u>Y4: \$120,000</u> Total: \$480,000
021GF-16 HM	Robert Garry	TUHSC	Predoctoral Training in Biomedical Sciences	4 years 4 PhD @ \$28.5K	Y1: \$114,000 Y2: \$114,000 Y3: \$114,000 <u>Y4: \$114,000</u> Total: \$456,000
022GF-16 HM	David Seal	TUHSC	Social Determinants of Violence Prevention: A Public Health Approach Doctoral Training Fellowship Program, Tulane University School of Public Health & Tropical Medicine	4 years 6 PhD @ \$28K	Y1: \$168,000 Y2: \$168,000 Y3: \$168,000 <u>Y4: \$168,000</u> Total: \$672,000

023GF-16 CIS	Magdy Bayoumi	University of Louisiana at Lafayette	Recruitment of Superior Graduate Students in Computer Science	4 years 2 PhD @ \$27K	Y1: \$54,000 Y2: \$54,000 Y3: \$54,000 <u>Y4: \$54,000</u> Total: \$216,000
024GF-16 BIO	Paul Klerks	University of Louisiana at Lafayette	Recruiting Superior PhD Students in Environmental and Evolutionary Biology for 2016	4 years 3 PhD @ \$30K	Y1: \$90,000 Y2: \$90,000 Y3: \$90,000 <u>Y4: \$90,000</u> Total: \$360,000
025GF-16 ENG	Jim Lee	University of Louisiana at Lafayette	Recruiting Superior Ph.D. Students in Emerging Research Areas of Systems Engineering	4 years 6 PhD @ \$30K	Y1: \$180,000 Y2: \$180,000 Y3: \$180,000 <u>Y4: \$180,000</u> Total: \$720,000
026GF-16 EARTH	Brian Lock	University of Louisiana at Lafayette	Masters' Level Graduate Fellowships in Geology at the University of Louisiana at Lafayette	2 years 2 MS @ \$21K	Y1: \$42,000 <u>Y2: \$42,000</u> Total: \$84,000
027GF-16 MATH	Arturo Magidin	University of Louisiana at Lafayette	Recruitment of Superior Graduate Students in Mathematics for PhD Program	4 years 3 PhD @ \$28.5K	Y1: \$85,500 Y2: \$85,500 Y3: \$85,500 <u>Y4: \$85,500</u> Total: \$342,000
028GF-16 PHYS	Gabriela Petculescu	University of Louisiana at Lafayette	Recruitment of Superior Physics Graduate Students	2 years 2 MS @ \$18K	Y1: \$36,000 <u>Y2: \$36,000</u> Total: \$72,000

029GF-16 BIO	Bernard Rees	University of New Orleans	Graduate Fellowships in Integrative Biology at the University of New Orleans	4 years 1 PhD @ \$28K	Y1: \$28,000 Y2: \$28,000 Y3: \$28,000 <u>Y4: \$28,000</u> Total: \$112,000
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TRADITIONAL GRADUATE FELLOWS PROPOSAL SUBMISSION SUMMARY

NUMBER SUBMITTED: 29

Agricultural Sciences: 0

Biological Sciences: 5

Business: 1

Chemistry: 3

Computer & Information Sciences: 2

Earth/Environmental Sciences: 2

Education: 1

Engineering A&B: 4

Health & Medical Sciences: 5

Mathematics: 3

Physics/Astronomy: 3

FIRST-YEAR FUNDS REQUESTED: \$2,578,500

TOTAL FUNDS REQUESTED: \$9,988,000

TOTAL FIRST-YEAR FUNDS AVAILABLE: \$780,000

**Graduate Fellowships for Teachers Program
2014-15 Competition
Proposals Submitted**

Proposal#/ Discipline	PI Name(s)	Institution	Proposal Title	Duration	Funds Requested
001GFT-16 ED	Byron Launey	LSU-Baton Rouge	Improving Classroom Interest in Science and Mathematics by Preparing Highly Qualified Teachers	1 year 6 MS @ \$20K	\$120,000

GRADUATE FELLOWSHIPS FOR TEACHERS PROPOSAL SUBMISSION SUMMARY

NUMBER SUBMITTED: 1

TOTAL FUNDS REQUESTED: \$120,000

TOTAL FIRST-YEAR FUNDS AVAILABLE: \$120,000