

**FY 2011-2012 PLAN AND BUDGET
FOR THE EXPENDITURE OF REVENUES AVAILABLE FROM THE
BOARD OF REGENTS SUPPORT FUND
WITH AN OVERVIEW OF RESULTS OBTAINED**

**SUBMITTED TO THE
GOVERNOR AND THE LEGISLATURE
IN ACCORDANCE WITH THE CONSTITUTIONAL PROVISIONS OF
ARTICLE VII, SECTION 10.1**

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BOARD OF REGENTS**

TABLE OF CONTENTS

OVERVIEW OF RESULTS	i
PREFACE.....	1
1. INTRODUCTION	1
1.1 Board of Regents Support Fund Projection, FY 2011-12	1
1.2 Budget Rationale and Preamble.....	1
1.3 Adoption of FY 2011-12 Plan and Budget	2
2. LONG-RANGE PLANNING AND EVALUATION	2
2.1 Long-Range Planning	2
2.2 Long-Range Evaluation	3
3. AN OVERVIEW OF RESULTS OBTAINED	4
3.1 Statewide Results	4
3.2 Results from Selected Projects.....	5
3.3 Multiplier Effects	5
4. LEVERAGING BOARD OF REGENTS SUPPORT FUND MONEY, EXPANDING BOARD OF REGENTS SUPPORT FUND OPPORTUNITIES, AND PROMOTING MULTI-INSTITUTIONAL COOPERATION AND COLLABORATION	5
4.1 Funded Proposals: Joint Board of Regents Support Fund/Federal Programs with Statewide Impact.....	6
4.2 Pending Proposals.....	10
4.3 Multidisciplinary, Multi-Institutional Proposals in Support Fund Program Components	10
5. BOARD OF REGENTS SUPPORT FUND PROGRAM COMPONENTS	11
5.1 Budgetary Contingencies.....	11
5.2 Endowed Chairs for Eminent Scholars	11
5.3 Recruitment of Superior Graduate Students	12
5.4 Carefully Defined Research Efforts.....	14
5.4.1 Research Competitiveness Subprogram	15
5.4.2 Industrial Ties Research Subprogram.....	16
5.4.3 Awards to Louisiana Artists and Scholars.....	17
5.4.4 Summary of FY 2011-12 Research and Development Expenditures	17

5.5	Enhancement of the Quality of Departments or Units	17
5.5.1	Undergraduate Enhancement Program	18
5.5.2	Endowed Professorships Program	18
5.5.3	Enhancement Program for Two-Year Institutions	19
5.5.4	The Louisiana Systemic Initiatives Program	20
5.5.5	Endowed Undergraduate Scholarship Program for First-Generation College Students.....	20
5.5.6	Traditional Enhancement Program	21
5.5.7	Post-Katrina Support Fund Initiative	22
5.5.8	Summary of FY 2011-12 Enhancement Expenditures	23
5.6	Administrative Expenses	24
6.	OVERVIEW OF FY 2011-12 BUDGETARY ALLOCATIONS BY PROGRAM COMPONENT	25

TABLES AND SCHEDULES

Table I:	Federal Matching Grants Program.....	7
Schedule I:	Eligibility of Disciplines in the Graduate Fellows Program	14
Schedule II:	Eligibility of Disciplines in the Research Competitiveness Subprogram	16
Schedule III:	Eligibility of Disciplines in the Traditional and Undergraduate Enhancement Programs	22
Table II:	An Overview of Board of Regents Support Fund Budgetary Allocations by Program Component, FY 2011-12	25

ATTACHMENTS

- I. Funded Proposals: Joint Federal/State Programs with Statewide Impact
- II. Results of Selected Projects
- III. Taxonomy of Disciplines

OVERVIEW OF RESULTS

Investment of Board of Regents Support Fund Money in Higher Education 1987 - 2010

- ◆ **\$1,089,454,083 GENERATED IN EXTERNAL FUNDS**
 - **\$781,254,083 in new external funding** (through 6/30/2010) from Federal, private and other non-Support Fund sources
 - **\$308,200,000 in external contributions** for Endowed Chairs and Professorships
- ◆ **2,810 EXTERNAL AWARDS** from Federal, private and other non-Support Fund sources
- ◆ **301 ENDOWED CHAIRS FOR EMINENT SCHOLARS** established at 27 campuses
 - Two hundred sixty-five (265) \$1 million chairs
 - Thirty-six (36) \$2 million chairs
 - Includes ninety-nine (99) chairs funded by special legislative appropriation
- ◆ **2,226 \$100,000 PROFESSORSHIPS** endowed at 39 campuses
- ◆ **1,394 SUPERIOR GRADUATE FELLOWS** supported at 14 campuses
- ◆ **1:1.56 RATE OF RETURN** for all projects funded since 1987
 - For every Support Fund dollar invested, \$1.56 has been returned to the State during the life of the awards
- ◆ **194 PATENTS ISSUED, 179 PATENT APPLICATIONS PENDING** during the life of the awards
- ◆ **9,723 PUBLICATIONS** in peer-reviewed journals
- ◆ **LOUISIANA SYSTEMIC INITIATIVES PROGRAM (LaSIP)** university-based Professional Development produces rising student test scores on statewide tests
- ◆ **EXPANDED MULTI-CAMPUS COLLABORATION** increases competitiveness for Federal R&D money

**PLAN AND BUDGET
FOR THE EXPENDITURE OF REVENUES AVAILABLE FROM
THE BOARD OF REGENTS SUPPORT FUND
FISCAL YEAR 2011-2012**

PREFACE

A sound educational system at all levels and in all disciplines, which is well-supported on a consistent basis, is crucial to achieving the two goals established in the Constitutional amendment which created the Louisiana Education Quality Support Fund (hereinafter referred to as Board of Regents Support Fund): enhancing academic programs and units and promoting economic development. The four programs of the Board of Regents Support Fund (BoRSF) pursue separate but related strategies in the quest to achieve these goals. All disciplines are eligible to compete in the Graduate Fellows, Enhancement, and Endowed Chairs programs, thus reflecting the Board's broad and long-range commitment to building and maintaining strength across all disciplines and, in so doing, to promote economic development through the enhancement of higher education in general. The Research and Development (R&D) Program has primarily supported those science and technology disciplines in which basic and applied research generate near- and long-term economic development and diversification in Louisiana, as well as contribute to fundamental knowledge.

I. INTRODUCTION

According to Article VII, Section 10.1 of the Louisiana Constitution, at least sixty days prior to each regular session of the Legislature the Board of Regents must submit to the Governor and the Legislature a proposed plan and budget for the expenditure, during the coming fiscal year, of money available to higher education from the Board of Regents Support Fund. Higher education's portion of these funds may be spent for "any or all" of the following purposes: (1) endowment of chairs for eminent scholars (hereinafter referred to as the Endowed Chairs Program); (2) recruitment of superior graduate students (the Graduate Fellows Program, including Traditional Graduate Fellows, Graduate Fellowships for Teachers, and the BoR/SREB Doctoral Scholars Program); (3) carefully defined research efforts (the Research and Development Program, including the Research Competitiveness Subprogram [RCS], the Industrial Ties Research Subprogram [ITRS], and the Awards to Louisiana Artists and Scholars [ATLAS] Subprogram); and (4) enhancement of the quality of academic, research, or agricultural departments or units within a university (the Enhancement Program, including Traditional Enhancement, Undergraduate Enhancement, the Enhancement Program for Two-Year Institutions, the Post-Katrina Support Fund Initiative, the Federal Matching Grants Program, the Louisiana Systemic Initiatives Program [LaSIP], the Endowed Professorships Program, and the Endowed Undergraduate Scholarships Program).

1.1 BOARD OF REGENTS SUPPORT FUND PROJECTION, FY 2011-12

The base amount used in the FY 2011-12 BoRSF Plan and Budget is \$25,600,000. Projections from the State Treasurer and Revenue Estimating Conference, as well as current and historic trends, Board policies and interpretations of the Board's Finance Section were considered in deriving this base funding level.

1.2 BUDGET RATIONALE AND PREAMBLE

In deliberations about the Board of Regents Support Fund Plan and Budget for FY 2011-12, the Board recognized several Support Fund issues requiring long-range strategic planning:

- steadily increasing demands for Support Fund resources under all four program components with concomitant increases in proposal quality and outstanding results achieved, including the leveraging **during the grant period** of \$1.56 in non-State money for every Support Fund dollar awarded;

- the State's expanding emphasis on economic development and diversification, particularly related to 21st-century innovation industries;
- greater emphasis on strategic investment in research through the Fostering Innovative Research in Science and Technology for Louisiana (FIRST Louisiana) statewide plan as well as the Board's master planning;
- the need for improved data collection and enhanced evaluation to better inform decision making; and
- attention, especially during a period of continuing budgetary challenges, to constitutional restrictions on supplanting State appropriations with Support Fund dollars.

It is vital that strength be maintained in and across all four interrelated Support Fund components. While the Board lauds the private philanthropy reflected in applications for endowed chairs, professorships, and undergraduate scholarships, it is also mindful that significant cuts in budgets for Enhancement, R&D and Recruitment of Superior Graduate Students would jeopardize the viability of these components and hence impair the overall quality of the Support Fund programs. Endowed chairholders and professors must have basic infrastructural equipment, supportive cutting-edge research across departments and units, and top-quality graduate students in order to achieve the results expected of them, making it imperative to balance matching funds for endowments with monies for competitive grants in the Enhancement, R&D and Graduate Fellows programs.

1.3 ADOPTION OF FY 2011-12 PLAN AND BUDGET

The following Plan and Budget for FY 2011-12 were adopted by the Board of Regents at its meeting of January 6, 2011.

2. LONG-RANGE PLANNING AND EVALUATION

2.1 LONG-RANGE PLANNING

In FY 1987-88 the Board of Regents determined that, in addition to the Constitutionally required annual plan and budget which set forth short-term programmatic goals and fiscal objectives, long-range strategic plans were required to accomplish the interrelated purposes and goals of the Support Fund. Short-term activities outlined in the annual plans and budgets could then be shaped by these long-term goals.

The first long-range plan evolved from a carefully researched white paper prepared by the Louisiana Stimulus for Excellence in Research (LaSER) Committee. Titled *Strategic Plan for Higher Education's Portion of the Louisiana Education Quality Support Fund*, it was adopted in 1988. Cognizant of changes in economic conditions which affected academic issues, the Board in 1993 adopted a revised plan: *Board of Regents Support Fund Long-Range Strategic Plan for Higher Education*. It maintained the central themes and strategies of the earlier plan, adjusted to changing conditions and lessons learned. In 1999 the Board adopted a third revised plan to guide the Support Fund through FY 2005-06. In the wake of Hurricanes Katrina and Rita, the Board extended that Strategic Plan through FY 2006-07, and at its meeting of June 22, 2006 adopted the FY 2007-08 through

FY 2013-14 Strategic Plan. This current Plan continues the approach of balancing continuity based on effectiveness, with revisions reflecting lessons learned.¹

2.2 LONG-RANGE EVALUATION

From the first Strategic Plan in 1988, strategies have been in place for assessment of the Board of Regents Support Fund to determine its long-range impacts, and the levels of success attained by individual funded projects and the programs through which funding is awarded. In the early years, program and project success was evaluated annually by the BoRSF Planning Committee, using programmatic assessments provided by external reviewers and annual and/or final reports submitted by project directors. Beginning in FY 1990-91, the Board implemented a systematic evaluation process based on four elements: (1) collection of background information; (2) submission of annual and/or final reports by project directors; (3) submission of additional information one year after project termination; and (4) an evaluation by out-of-state experts of individual projects as well as overall programs. In the spring of 1994 such an evaluation was conducted by a distinguished panel of out-of-state experts. At that time, the panel concluded that the BoRSF was effectively and efficiently administered, was addressing some of the State's economic development and higher education infrastructure needs, and had been successful in attracting Federal funds to the State.²

As Support Fund operations continued in the 1990s, the need for a more comprehensive and regular assessment of programmatic benefits became evident. Accordingly, the Board conducted a thorough revision of the long-range evaluation system, adopting a cyclical process by which Support Fund programs could be assessed. Though the process began during the summer and fall of 1998 with the comprehensive review of the Endowed Chairs Program, the cyclical approach was codified in the 1999 BoRSF Strategic Plan. This first Endowed Chairs review and subsequent programmatic evaluations yielded significant benefits to Support Fund components:

- The 1998 Endowed Chairs review culminated in the March 1999 adoption of the Board of Regents Endowed Chairs Policy, which significantly strengthened a program with already impressive accomplishments.
- The FY 1999-2000 comprehensive review of the Endowed Professorships Program led to the adoption, in December 2000, of the Board of Regents Endowed Professorships Policy, providing for the improvement of that program.
- The FY 2000-01 review of the Recruitment of Superior Graduate Students Program led to the January 2002 adoption of recommendations designed to elevate the program's accomplishments.
- The FY 2001-02 review of the Research and Development Program yielded a powerful endorsement of the program's success as well as recommendations for improvement.

In each instance, insights from programmatic reviews led to the adoption of measures that further strengthened these Support Fund components and thus maximized their positive impact on Louisiana higher education.

¹ Copies of the 1988, 1993, 1999, and 2007 Strategic Plans are available in the Board's office and at <http://web.laregents.org/program-evaluations/strategic-planning/>.

² The panel report is available in the Board's office.

The evaluation cycle was begun anew during FY 2008-09, as a distinguished team of experts again comprehensively assessed the Endowed Chairs for Eminent Scholars Program. This review resulted in policy and program revisions implemented during the 2009-10 review process which are already yielding benefits. The R&D Program is being comprehensively evaluated during 2010-11, with other Support Fund programs to be assessed in future years on a rotating basis.

3. AN OVERVIEW OF RESULTS OBTAINED

Significant benefits are accruing to the State as a result of the Support Fund investment in higher education. The results reported herein are even more impressive when one understands that: (1) realization of the full benefit of investment in higher education is a long-term proposition, and evolving results become manifest only after a period of many years; (2) reported results include **only benefits derived during the life of the grants awarded**, and do not attempt to measure the many benefits which accrue to affected institutions after the conclusion of relatively brief Support Fund contracts; and (3) no specific benefits beyond the initial private match are claimed as a result of the Endowed Chairs for Eminent Scholars Program, and no specific external grants are attributed to the Recruitment for Superior Graduate Students program. Programmatic evaluations have led the Board to adopt reporting mechanisms which will, however, enable measurement of external funding success across BoRSF components.

Annual and/or final reports have been used since the inception of the BoRSF to monitor the progress of all projects. A few of the most significant achievements are described in the following sections.

3.1 STATEWIDE RESULTS

- * **\$1,089,454,083 in external funds have been generated** from Federal, private, and industrial sources as a result of the Board of Regents Support Fund's investment in higher education, thereby significantly increasing the total monies available for higher education. This represents a **return of \$1.56 for every Support Fund dollar invested** in higher education since the inception of the programs. The figure reflects only external funds generated during the life of the awards--additional revenues are and will continue to be generated after the expiration of the awards.
- * **Increased collaboration and coordination of efforts between the Board of Regents and the Board of Elementary and Secondary Education (BESE)**, as evidenced by the joint funding of the Louisiana Systemic Initiatives Program (LaSIP) to reform K-12 and undergraduate instruction in science and mathematics and the efforts of the two boards to improve education through the Blue Ribbon Commission on Teacher Quality. (See Attachment I for descriptions of these projects.) Those collaborative efforts also contributed to the funding of Louisiana Gaining Early Awareness and Readiness for Undergraduate Programs (LA GEAR UP) by the U.S. Department of Education for \$15 million from 2002 through 2008. LA GEAR UP received a new \$18 million award in 2008, which extends through 2014.
- * **2,810 grants and/or contracts have been awarded** to Louisiana universities from external funding agencies directly as a result of BoRSF investments.
- * An analysis performed by the Louisiana Department of Economic Development concluded that, for all completed Industrial Ties Research Subprogram projects, **48% had either been successfully commercialized or were in the process of commercialization**. Forty-five percent (45%) of those

projects that were successfully commercialized are protected by a patent and/or license. Additionally, **almost 60% of all completed projects reported significant to moderate industrial interaction.**

- * **Increased institutional collaboration has resulted from Support Fund investments, as evidenced by the multi-million dollar, multi-institutional grants awarded to the Board of Regents on behalf of statewide university consortia for research reform initiatives.** Their purpose is to increase research capacity and success, as well as the amount of Federal research and development money awarded to Louisiana scientists and engineers statewide. (See descriptions of awards in Attachment I.)
- * **194 patents issued and another 179 applications pending** during the life of the awards.

3.2 RESULTS FROM SELECTED PROJECTS

See Attachment II for brief summaries of the achievements of selected recent projects across Support Fund components.

3.3 MULTIPLIER EFFECTS

Using the input/output table constructed by the Bureau of Economic Analysis in the U. S. Department of Commerce and housed in the Department of Economics at LSU, one can estimate the multiplier effects that such an infusion of new dollars creates on the Louisiana economy in terms of new revenues, income, and jobs for Louisianians.

Effects of the \$1,089,454,083 in new revenues generated from Board of Regents Support Fund projects are estimated as follows:³

- **Approximately \$2.24 billion in new revenues to Louisiana firms and organizations;**
- **Approximately \$913 million in new income for Louisiana citizens; and**
- **Approximately 39,635 new jobs for Louisianians.**

4. LEVERAGING BOARD OF REGENTS SUPPORT FUND MONEY, EXPANDING BOARD OF REGENTS SUPPORT FUND OPPORTUNITIES, AND PROMOTING MULTI-INSTITUTIONAL COOPERATION AND COLLABORATION

The Board began co-sponsoring research projects with the National Science Foundation (NSF) and supporting the development of scientific research and educational infrastructure in Louisiana under NSF's Experimental Program to Stimulate Competitive Research (EPSCoR) during FY 1988-89. In FY 1991-92 the Board dedicated a portion of Board of Regents Support Fund monies as matching commitments for two statewide, multi-institutional initiatives to be submitted in national competitions for Federal funds in areas that coincide with constitutionally prescribed BoRSF activities. These initiatives were the NSF LaSER Advanced Development Proposal (ADP) and the Louisiana Systemic Initiatives Program (LaSIP) in Math and Science Education.⁴ The reasons for, and goals of, these matching commitments were fourfold:

³ These estimates were determined through application of a formula developed by Dr. Loren Scott of LSU-BR, who authored "The Impact on the Louisiana Economy of \$66.5 Million in Outside Research Funding at LSU," January 1990.

⁴ Details of these awards are included in Attachment I.

- To continue and accelerate the leveraging of Federal money with BoRSF investments, as continues to be accomplished by principal investigators of individually funded Support Fund projects described in Attachment II of this Plan and Budget;
- To expand opportunities available through Support Fund programs;
- To augment the building of infrastructure begun under traditional Support Fund programs, which is necessary to enable Louisiana's universities to compete more successfully for Federal research money; and
- To promote multi-institutional collaboration and cooperation among Louisiana's colleges, universities, and K-12 schools.

The FY 1991-92 Board of Regents Support Fund Plan and Budget described the dedication of BoRSF money as State matching commitments for these multi-year Federal grant proposals (in preparation during FY 1990-91) under the auspices of the Board. Each proposal required significant State matching money as a condition of funding.

4.1 FUNDED PROPOSALS: JOINT BOARD OF REGENTS SUPPORT FUND/FEDERAL PROGRAMS WITH STATEWIDE IMPACT

The Board was successful in the competitions described above, and these efforts encouraged a continued quest for competitive Federal research and educational dollars from the National Science Foundation (NSF) and a variety of other agencies including the National Aeronautics and Space Administration (NASA), the Department of Defense (DOD), the Department of Energy (DOE), the Department of Commerce, the Environmental Protection Agency (EPA), and the National Institutes of Health (NIH). Support Fund obligations for these Federal grants appear below in Table I. A more detailed description of each grant, including the Federal funds received for each, can be found in Attachment I.

The Board's decision to leverage the Support Fund by targeting matches for Federal grant opportunities has borne significant fruit. It has enabled the State to progress from receiving minimal support from NSF for research collaborations in the 1980s, to the current environment, in which Louisiana is among the elite of EPSCoR states in successful research-related grants and activities.

Table I
Federal Matching Grants Program
For Joint State and Federal Projects with Systemic and/or Statewide Impact
By Types of Support Fund Activity, Monetary Commitment, and Duration

Federal Grant	Type of Support Fund Activity	Amount of Annual Matching Commitment	Amount of Total Matching Commitment	FYs in which Commitment is Applicable	Total Length of Commitment in Years
NSF/EPSCoR ¹ LaSER Implementation	TR ENH: 30% R&D: 70%	Yr. 1 \$685,043 Yr. 2 440,202 Yr. 3 191,791	\$1,317,036	1988-89 through 1990-91	3 ¹
NSF/SI LaSIP	TR ENH, UG ENH, PLEX: Prorata	\$1 Million	\$5 Million	1991-92 through 1995-96	5
NSF/EPSCoR LaSER Advanced Development Program	TR ENH: 1/3 GR FEL: 1/3 ² ITRS: 1/3	\$1.2 Million	\$4.8 Million	1991-92 through 1994-95	4
NASA/ LaSPACE	RCS: 60% GR FEL: 40% ²	\$100,000	\$500,000	1991-92 through 1995-96	5
NSF/SI LaCEPT	TR ENH: 100%	\$500,000	\$2.5 Million	1992-93 through 1996-97	5
DOE/EPSCoR Implementation	TR ENH: 60% RCS: 40%	\$519,795	\$1,039,590	1993-94 through 1994-95	2
DOD/EPSCoR Planning	TR ENH: 100%	\$ 25,000	\$ 25,000	1993-94	1
NASA/EPSCoR Implementation	TR ENH: 50% RCS: 25% GR FEL: 25% ²	\$500,000	\$1.5 Million	1994-95 through 1996-97	3
1993 DEPSCoR Implementation	TR ENH: 50% RCS: 25% GR FEL: 25% ²	Yr. 1 \$166,666 Yr. 2 166,666 Yr. 3 166,667	\$500,000	1994-95 through 1996-97	3
NSF/SI Teaching Scholars	TR ENH: 100%	\$ 50,000	\$250,000	1994-95 through 1998-99	5
NSF/EPSCoR LaSER Systemic Initiatives	TR ENH: 60% UG ENH: 10% R&D: 20% GR FEL: 10% ²	\$1 Million	\$3 Million	1995-96 through 1997-98	3
DOE/EPSCoR Implementation Renewal	TR ENH: 10% R&D: 70% GR FEL: 20% ²	\$800,000	\$3.2 Million	1995-96 through 1998-99	4
NSF/SI LAMP	TR ENH: 100%	Yr.1 \$200,000 Yrs. 2-5 \$500,000	\$2.2 Million	1995-96 through 1999-2000	5

¹ The thirteen research projects that were a part of the first NSF/EPSCoR award received Board of Regents Support Fund money for two years prior to receiving NSF support in January of 1989 (FY 1988-89), for a total of five years and \$3,374,355 in Board of Regents Support Fund money. This table reflects only years three through five of Board of Regents Support Fund money (or \$1,317,036), since only that period of State support that coincides with Federal Support can be counted as part of the State's matching commitment. (See Section 4.1.1.)

² Because of the nature of the Graduate Fellows Program, money for this component must be committed in the fiscal year prior to expenditure. For this reason, the first year's Graduate Fellows portion of matching funds committed to a particular project was usually actually charged to Enhancement or R&D, or prorated between the two program components.

Table I (Continued)

Federal Grant	Type of Support Fund Activity	Amount of Annual Matching Commitment	Amount of Total Matching Commitment	FYs in which Commitment is Applicable	Total Length of Commitment in Years
NASA LaSPACE Renewal	RCS: 50% GR FEL: 50% ²	\$100,000	\$400,000	1996-97 through 1999-2000	4
1995 DEPSCoR Implementation	TR ENH: 50% R&D: 25% GR FEL: 25% ²	Yr. 1 \$551,439 Yr. 2 311,740 Yr. 3 311,972	\$1,175,151	1996-97 through 1998-99	3
NSF/SI LaSIP Renewal	TR ENH: 100%	\$1 Million	\$5 Million	1996-97 through 2000-01	5
NASA/EPSCoR Implementation Renewal	TR ENH: 50% RCS: 25% GR FEL: 25% ²	\$500,000	\$1 Million	1997-98 through 1998-99	2
NSF/SI Delta Rural SI	TR ENH: 100%	\$200,000	\$1 Million	1997-98 through 2001-02	5
LaCEPT Supplemental	TR ENH: 100%	\$100,000	\$300,000	1998-99 through 2000-01	3
1997 DEPSCoR Implementation	TR ENH: 50% R&D: 25% GR FEL: 25% ²	\$250,000	\$750,000	1997-98 through 1999-2000	3
NSF/EPSCoR New Cooperative Agreement	TR ENH: 75% R&D: 25%	\$1 Million	\$3 Million	1998-99 through 2000-01	3
1999 DEPSCoR Implementation	TR ENH: 100%	Yr. 1 \$65,998 Yr. 2 61,900 Yr. 3 61,900	\$189,798	1999-2000 through 2001-02	3
EPSCoT	TR ENH: 100%	\$300,000	\$300,000	1999-2000	1.5
NASA/EPSCoR Continuation Funding	TR ENH: 100%	\$250,000	\$250,000	1999-2000	1
NASA/EPSCoR Preparation Grant	TR ENH: 100%	\$100,000	\$100,000	1999-2000	1
NASA LaSPACE Continuation	TR ENH: 100%	\$200,000	\$1,000,000	2000-01 through 2004-05	5
EPA/EPSCoR 2000	TR ENH: 100%	Yr. 1 \$255,261 Yr. 2 244,739	\$500,000	1999-2000 through 2000-01	2
LAMP Phase II	TR ENH: 100%	\$500,000	\$2.5 Million	2000-01 through 2004-05	5
NSF/EPSCoR Research Infrastructure Improvement	TR ENH: 100%	\$1 Million	\$3 Million	2001-02 through 2003-04	3
NASA/EPSCoR 2000	TR ENH: 100%	\$700,000	\$2.1 Million	2001-02 through 2003-04	3
EPA/EPSCoR 2001	TR ENH: 100%	Yr. 1 \$250,000 Yr. 2 244,542	\$494,542	2002-03 through 2003-04	2
NSF/EPSCoR Research Infrastructure Improvement II	TR ENH: 100%	\$1 Million	\$3 Million	2003-04 through 2005-06	3

Table I (Continued)

Federal Grant	Type of Support Fund Activity	Amount of Annual Matching Commitment	Amount of Total Matching Commitment	FYs in which Commitment is Applicable	Total Length of Commitment in Years
DOE/EPSCoR Implementation 2004	TR ENH: 100%	\$400,000	\$1.2 Million	2004-05 through 2006-07	3
NASA/EPSCoR 2000 Renewal	TR ENH: 100%	\$493,280	\$986,560	2004-05 through 2005-06	2
LAMP Phase III	TR ENH: 100%	\$500,000	\$2.5 Million	2005-06 through 2009-10	5
NASA LaSPACE Continuation II	TR ENH: 100%	\$200,000	\$1 Million	2005-06 through 2009-10	5
NASA/EPSCoR 2006 - Infrastructure	TR ENH: 100%	\$125,000	\$375,000	2006-07 through 2008-09	3
NASA/EPSCoR 2006 - Research 1	TR ENH: 100%	\$250,000	\$750,000	2006-07 through 2008-09	3
NASA/EPSCoR 2006 - Research 2	TR ENH: 100%	\$250,000	\$750,000	2006-07 through 2008-09	3
NSF EPSCoR Cyber RII	TR ENH: 100%	\$1 Million	\$3 Million	2006-07 through 2008-09	3
DOE EPSCoR Implementation Renewal	TR ENH: 100%	\$400,000	\$1.2 Million	2007-08 through 2009-10	3
NASA EPSCoR 2009 - Research 3	TR ENH: 100%	\$250,000	\$750,000	2009-10 through 2011-12	3
NASA EPSCoR 2009 - Infrastructure	TR ENH: 100%	\$125,000	\$375,000	2009-10 through 2011-12	3
NASA EPSCoR 2009 - Research 4	TR ENH: 100%	\$250,000	\$750,000	2009-10 through 2011-12	3
NSF EPSCoR RII Track 1 Proposal	TR ENH: 100%	\$2 Million	\$10 Million	2009-10 through 2013-14	5
NASA LaSPACE Renewal	TR ENH: 100%	\$250,000	\$1.25 Million	2010-11 through 2014-15	5
LAMP Phase IV	TR ENH: 100%	\$500,000	\$2.5 Million	2010-11 through 2014-15	5
NASA EPSCoR 2009- Research 5 (Pending)	TR ENH: 100%	\$250,000	\$750,000	2011-12 through 2013-14	3
DOE EPSCoR Implementation 2011 (Pending)	TR ENH: 100%	\$500,000	\$1,500,000	2011-12 through 2013-14	3

4.2 PENDING PROPOSALS

The NASA EPSCoR program issued a Cooperative Agreement Notice (CAN) research announcement on December 17, 2010 for university-based research activities which will make significant contributions to the strategic research and development priorities of NASA and to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State. Proposals will be submitted in response to this announcement in March 2011.

The U.S. Department of Energy issues periodic solicitations for research implementation grants that seek to improve academic research infrastructure in key energy-related science and technology areas identified by the State. Issuance of a solicitation for FY 2011 is expected during the first quarter of 2011.

It is anticipated that \$750,000 will be required in FY 2011-12 to provide match to successful projects funded through these Federal programs. The funds are included as new awards in the Federal Matching Grants component of the Enhancement Program (see Section 5.5).

4.3 MULTIDISCIPLINARY, MULTI-INSTITUTIONAL PROPOSALS IN SUPPORT FUND PROGRAM COMPONENTS

The Board has long recognized the potential of multidisciplinary and/or multi-institutional projects to enhance academic quality and promote economic development, as well as to make the most prudent use of scarce State resources. Accordingly, the Board has encouraged these kinds of proposals since the inception of the Board of Regents Support Fund, not only as part of the joint Federal/State efforts described in Section 4.1 of this Plan and Budget, but also in proposals submitted under the traditional BoRSF program components. The best known manifestations of the Board's support of proposals of this type are an \$800,000 Enhancement award to provide initial funding to the Louisiana Academic Library Network (LaLINC) project, which has computerized databases and linked academic libraries throughout the State, and an award of \$3,500,000 to support the efforts of the Louisiana Optical Network Initiative (LONI).

To further emphasize its belief in the potential of multidisciplinary, multi-institutional efforts to achieve BoRSF goals and promote the best interests of the State, in its most recent solicitation for proposals, as well as in the 1993, 1999 and 2006 revisions of the Strategic Plan, the Board specifically encouraged the submission of collaborative proposals which would provide statewide benefits. Beginning with its FY 2000-01 budget, and continuing in FY 2011-12, the Board has set aside funds each year from the Traditional Enhancement program for the funding of these types of projects. The Board reaffirms the eligibility and encourages the submission of multidisciplinary, multi-institutional proposals in all Support Fund program components for FY 2011-12. Consistent with the growing emphasis placed on interdisciplinary research throughout the academic community and the large numbers of quality proposals submitted each year in the Multidisciplinary Enhancement category of Traditional Enhancement, the Board first increased the funds available for awards in this category to \$950,000 in the FY 2004-05 Plan and Budget. The funding level for Multidisciplinary Enhancement has since been calculated as a percentage of the Traditional Enhancement budget (20%). This percentage calculation will continue in the FY 2011-12 Plan and Budget. Any unexpended Multidisciplinary funds will revert to discipline-based Traditional Enhancement (see Section 5.5).

5. BOARD OF REGENTS SUPPORT FUND PROGRAM COMPONENTS

5.1 BUDGETARY CONTINGENCIES

If in FY 2011-12 the income received for the higher education portion of the Louisiana Education Quality Support Fund is greater than the \$25,600,000 projected, the additional revenues shall be returned to the Traditional Enhancement Program until its allocation reaches \$8,000,000. Any amount thereafter shall be returned to the competitive Enhancement components and Research and Development subprograms on a pro-rata basis. In the event that reductions are necessary, they shall be accommodated through a proportionate reduction in the first-year amounts allocated for proposals in the Enhancement and R&D Program components.

5.2 ENDOWED CHAIRS FOR EMINENT SCHOLARS - \$3,220,000

The Endowed Chairs for Eminent Scholars Program, introduced in 1987, is designed to enhance the recruitment and retention of distinguished university faculty at institutions throughout Louisiana. Through FY 2009-10, 301 chairs have been funded at twenty-seven institutions, and the program has generated a total endowment (counting private match) of \$337 million.

The program pairs a 60% private-sector match with a 40% Board of Regents award to endow a chair to be filled by an exemplary scholar. The Board endows chairs in any discipline at three levels: \$1 million total endowment (\$600,000 match/\$400,000 BoRSF); \$2 million total endowment (\$1.2 million match/\$800,000 BoRSF); and \$3 million total endowment (\$1.8 million match/\$1.2 million BoRSF). Thirty-six (36) of the 301 chairs awarded have been at the \$2 million level. Beginning in FY 2009-10, chair applications have also been permitted at the \$3 million level, though none have yet been received.

The competition established to determine endowment awards is rigorous and highly selective. A panel of out-of-state experts reviews proposals on an annual basis, recommending for funding those most representative of and able to achieve the goals of the program. Stringent rules governing the selection of the faculty recipient are designed to ensure his or her excellence. An endowed chair must be filled through a national search and the committee conducting the search must include at least one individual recognized as an expert in the field of the chair but not affiliated with the institution, the private donor, or the Board of Regents. While a chair recipient may be selected from within the affected campus, this should occur infrequently and only when a national search has documented the national and/or international eminence of the prospective chairholder.

As the national search guarantees the past reputation of the chairholder, periodic peer reviews of the chairholder are intended to assure continued accomplishment. Chairholders are held to standards of performance which require that they maintain a highly productive record of scholarly and/or creative endeavors, exceptional teaching, recruitment and mentoring of high-quality students, leadership activities, and enhancement of the State's economy.

Important Historical Milestones

- Funds first awarded in 1987
- Has been budgeted at an annual level of \geq \$3.2 million since 1990

- “First-come, first-served” approach replaced by competitive process in 1993
- Legislative supplemental appropriations, beginning in FY 1995-96 and continuing in several subsequent years, have enabled the funding of 99 additional chairs
- Comprehensive reviews conducted in 1993, 1998 and 2009; recommendations adopted for significant strengthening of the program, especially in 1999 and 2009
- “Special Provisions for Public Four-Year Campuses with Fewer than Three Eminent Scholars Chairs,” adopted in 2001, allowed public four-year institutions with fewer than three chairs to invert the 60:40 ratio of private funds/BoRSF, but retained the principle of competition without favor. Through FY 2005-06 when the special provisions expired, nine chairs (three from Northwestern State University, two from Louisiana State University-Shreveport, and one each from Grambling State University, Louisiana State University-Alexandria, Southern University-Baton Rouge, and Southern University-New Orleans) were funded under its aegis. One additional proposal from Southern University-New Orleans was funded under special circumstances in FY 2006-07.

5.3 RECRUITMENT OF SUPERIOR GRADUATE STUDENTS - \$3,846,000

The Recruitment of Superior Graduate Students component, also called the Graduate Fellows Program, provides resources to select departments to bring top-quality students to their graduate programs. Through FY 2010-11, the Board of Regents has provided 1,394 graduate fellowships to a spectrum of departments at fourteen institutions in Louisiana. About 10% of these fellowships have been awarded to programs specifically targeting in-service teachers in mathematics and science disciplines pursuing master’s degrees in education. While the economic and cultural impact of these fellowships is difficult to quantify, it is clear that the program has contributed highly educated employees to Louisiana industry, expert teachers at levels from kindergarten to college, and a community of enthusiastic, energetic, and dedicated students to further the educational and research agendas at colleges and universities across the State.

The Traditional Graduate Fellows (GF) and Graduate Fellowships for Teachers (GFT) subprograms have been part of the Graduate Fellows Program since 1993. The Board became a full participant in the Southern Regional Education Board (SREB) Minority Scholars Program in FY 2007-08 and, as a result, established the Board of Regents/SREB Minority Fellowships to Promote Diversity subprogram (BoR/SREB). The Traditional subprogram primarily supports excellent doctoral-level fellows, but also allows stipends for students at master’s-level programs of distinction. The GFT subprogram offers support to pre- and in-service teachers seeking master’s degrees in science and/or mathematics. To apply for a GFT award, an applicant institution must offer a master’s program that can be completed in one academic year plus an additional summer, to allow teachers to finish within a single academic year’s sabbatical from the classroom. GFT fellowship recipients, further, must pledge to teach in a Louisiana school system for at least one year after completing the master’s degree, to ensure that Louisiana students reap some of the benefits of the State’s support of these teachers. The BoR/SREB subprogram, a continuation of the Perkins Doctoral Fellows Program established in response to the Louisiana Consent Decree, offers successful universities fellowships to recruit and retain excellent minority students in doctoral programs. The Traditional GF, GFT, and BoR/SREB subprograms provide a comprehensive opportunity for departments and universities across the State to receive assistance in the recruitment, training and support of high-quality graduate students.

Implementation of the Traditional GF and GFT subprograms requires the following schedule:

- Year One: Awarding of the grant by the Board of Regents
- Year Two: Recruiting by awardees of superior graduate candidates
- Year Three: Beginning disbursement of funds committed under the grant

For example, colleges and universities that submit successful proposals during the current fiscal year (FY 2010-11) will have a full year (FY 2011-12) during which to recruit students who, in turn, will enroll in Louisiana universities' graduate programs and receive the Board of Regents Support Fund fellowship for the first time in the fall of 2012 (FY 2012-13). The SREB subprogram, in contrast, does not require that fellowships be used for recruitment, so makes funds available in the fiscal year immediately following the award announcement (e.g., in FY 2011-12 for awards made in FY 2010-11).

The \$3,846,000 budgeted for this category for FY 2011-12, therefore, is almost entirely for previous obligations, including: (a) \$909,000 for fourth-year funding of graduate fellows who began their course of study in AY 2008-09; (b) \$976,000 for third-year funding of graduate fellows who began their course of study in AY 2009-10; (c) \$1,015,000 for funding of second-year graduate fellows who began their course of study in AY 2010-11; (d) \$921,000 for funding of graduate fellows who will begin their course of study in AY 2011-12; and (e) \$25,000 for review of proposals submitted during FY 2011-12. In addition to outlining prior commitments in the Graduate Fellows program in FY 2011-12, this information also notifies the Governor and the Legislature that an amount of approximately \$3.85 million will have been committed from the FY 2012-13 Support Fund budget prior to the submission of the annual plan and budget for that year.

In keeping with the conceptual framework that encourages the use of Support Fund money to enhance all areas of higher education, all disciplines are eligible to compete in the Graduate Fellows Program. Those disciplines accorded a higher priority for Louisiana's economic development are eligible to compete every year. The eligibility cycle for Graduate Fellows, including disciplines eligible in FY 2011-12, is specified in Schedule I.

SCHEDULE I: ELIGIBILITY OF DISCIPLINES* IN THE GRADUATE FELLOWS PROGRAM

GROUP I - ELIGIBLE EVERY YEAR

Biological Sciences
Chemistry
Computer and Information Sciences
Earth/Environmental Sciences
Engineering A and B
Health/Medical Sciences**
Physics/Astronomy

GROUP II - ELIGIBLE IN FYs 2008-09, 2010-11, 2012-13, 2014-15

Agriculture
Business
Education, including Literacy
Mathematics

GROUP III - ELIGIBLE IN FY 2009-10, 2011-12, 2013-14, 2015-16

Arts
Humanities
Social Sciences

*The listing of those sub-disciplines which are included in these larger groupings is in Attachment III.

**Effective with the Board action of June 22, 1995, the LSU Health Sciences Centers in New Orleans and Shreveport and the Tulane University Health Sciences Center are permitted to submit a maximum of three proposals each when Health and Medical Sciences is an eligible category. Health and Medical Sciences was made eligible each year in the 1999 revision of the Strategic Plan.

5.4 CAREFULLY DEFINED RESEARCH EFFORTS - \$4,885,000

A total of approximately \$2,500,000 will be required during FY 2011-12 to honor prior commitments for multi-year projects in the Board of Regents Support Fund Research and Development (R&D) Program. Since most research projects are multi-year endeavors, the Board has historically been conservative in recommending an increase in funds dedicated for new research projects in the R&D Program. Allocations for new awards in the R&D Program peaked at approximately \$2,800,000 in FY 1990-91. The budget for new R&D projects was reduced in FY 1991-92, in part because of a slight drop in total Support Funds available, but primarily as a result of the matching commitments required for Federal grants.

The Research Competitiveness Subprogram (RCS) has been consistently successful since its inception in FY 1986-87. Accordingly, the Board has made every effort to fund this subprogram at the highest possible level. The amount devoted to this subprogram for first-year awards was increased to \$1,500,000 in FY 1999-2000 and has been maintained since except in those years in which low economic forecasts mandated mid-year

budget cuts. Beginning in FY 2006-07 and continuing through the FY 2009-10 Plan and Budget, the amount for first-year awards was reduced to \$1,350,000 to facilitate funding of the Post-Katrina Support Fund Initiative. This level was restored in FY 2010-11 to \$1,500,000. Due to reductions in revenue over the past two years in combination with lower projected income in the BoRSF, in FY 2011-12 the funding level will again be reduced to \$1,350,000.

The Industrial Ties Research Subprogram, though it has resulted in a number of projects with significant economic benefits (see Attachment II), has also presented some challenges. Louisiana's relatively undiversified industrial economy and dearth of large industrial-based corporations (only one Fortune 500 company and relatively few industries with substantial capacity for R&D spending) have made it difficult for university faculty to foster meaningful partnerships with State-based industries. The Board significantly reduced the funding level for the Industrial Ties Research Subprogram to reflect this reality, and the amount available for first-year funding of this component was set at \$650,000 for several years. To make funds available for the Post-Katrina Support Fund Initiative, the amount was further reduced by 10%, to a first-year level of \$585,000, for FY 2006-07 through FY 2009-10. The funding level was restored to \$650,000 in FY 2010-11. In FY 2011-12, the funding level will again be reduced by 10%, to \$585,000, to accommodate lower projected income in the BoRSF.

While the R&D Program historically has been focused almost exclusively on the sciences, mathematics, and engineering, the Board remains cognizant of its responsibility, elucidated in each strategic plan since 1988, to improve the quality of education "at all levels in all disciplines." The comprehensive review of the R&D Program during FY 2001-02 documented the need for a subprogram with emphasis on the arts, social sciences, and humanities. This subprogram, modeled after the internationally famous John Simon Guggenheim Memorial Foundation Fellowships, was inaugurated at a funding level of \$500,000 in FY 2004-05. The funding level for this subprogram, now named the Awards to Louisiana Artists and Scholars (ATLAS) subprogram, remained at \$500,000 for FY 2005-06, but was reduced to \$450,000 in FY 2006-07 and subsequent years in order to make funds available for the Post-Katrina Support Fund Initiative. The funding level was restored to \$500,000 in FY 2010-11. In FY 2011-12, given lower projected income in the BoRSF, the funding level will again be reduced by 10%, to \$450,000.

5.4.1 Research Competitiveness Subprogram (RCS)

RCS is a stimulus program directed only toward those researchers who are at the threshold of becoming competitive in the Federal R&D marketplace. It is designed to assist these researchers to overcome the barriers that have prevented them from competing successfully at the national level for R&D funds. RCS is also directed only to those researchers who clearly show strong potential for enhancing their competitive status within the time span of a Board of Regents Support Fund grant. In every year since the subprogram's inception, far more Louisiana university researchers who fit this funding profile have submitted quality research proposals to RCS than the Board has been able to support and encourage with funding. Disciplines eligible to compete for research funds in the RCS are restricted to the sciences and engineering (as defined by the National Science Foundation), agriculture, and health and medical sciences. Most disciplines are eligible on a staggered, two-years-on, two-years-off cycle; however, three disciplines accorded the highest priority for economic development (biological, computer/information, and earth/environmental sciences) are targeted for funding annually. The eligibility cycle for RCS, including disciplines eligible in FY 2011-12, is specified in Schedule II.

SCHEDULE II: ELIGIBILITY OF DISCIPLINES* IN THE RESEARCH COMPETITIVENESS SUBPROGRAM

GROUP I - ELIGIBLE EVERY YEAR

Biological Sciences
Computer and Information Sciences
Earth/Environmental Sciences

GROUP II - ELIGIBLE IN FYs 2007-08, 2010-11, 2011-12, 2014-15

Agricultural Sciences
Engineering A (Chemical, Civil, Electrical, etc.)
Mathematics
Physics/Astronomy
Social Sciences

GROUP III - ELIGIBLE IN FYs 2008-09, 2009-10, 2012-13, 2013-14

Chemistry
Engineering B (Industrial, Materials, Mechanical, etc.)
Health and Medical Sciences

*The listing of those sub-disciplines which are included in these larger groupings is in Attachment III.

5.4.2 Industrial Ties Research Subprogram (ITRS)

The principal goal of ITRS is to fund research proposals that have significant near-term potential for contributing to the development and diversification of the Louisiana economy. Accordingly, all proposals and funded projects must demonstrate strong interest from and continued involvement by the private sector and/or non-state public agencies. Because ITRS also functions as a stimulus subprogram, funded projects should either (a) bring about significant near-term Federal or private-sector funding of research with commercial applications, or (b) enhance or establish a Louisiana business or industry that will attract significant external revenues to the State.

To ensure that no opportunities with the potential to promote economic development and diversification would be overlooked, the Board has, since 1993, opened competition in ITRS to proposals from any and all research areas. Further, the Board has attempted to encourage university/industry initiatives through cooperation with the Governor's Economic Development Cabinet and with related entities such as the Louisiana Department of Economic Development and the Louisiana Innovation Council.

5.4.3 Awards to Louisiana Artists and Scholars (ATLAS) Subprogram

The ATLAS Subprogram provides support for major scholarly and artistic productions with potential to have a broad impact on a regional and/or national level. ATLAS awards facilitate the completion of manuscripts for publications and/or the mounting of creative productions including recordings, performances, and gallery shows. The subprogram allows the State to profit from its rich cultural traditions and makes Louisiana faculty's expertise and creativity in these disciplines well known to the rest of the nation.

5.4.4 Summary of FY 2011-12 Research and Development Expenditures

<u>Prior Commitments (RCS and ITRS only):</u>		\$2,500,000
<u>New Awards:</u>	RCS	\$1,350,000
	ITRS	\$ 585,000
	ATLAS	<u>\$ 450,000</u>
R&D PROGRAM TOTAL		\$4,885,000

5.5 ENHANCEMENT OF THE QUALITY OF DEPARTMENTS OR UNITS - \$12,652,646

NOTE: Matching commitments for all Federal Matching Grants Program proposals for which Federal approval has not been received as of the date of submission of the affected Plan and Budget will be accommodated from the Enhancement Program. The Board has elected to operate in this manner because of (a) the uncertainty of a proposal's potential success in the national competition for Federal funds; (b) the Board's policy that any unexpended money in the Chairs, Graduate Fellows, and/or R&D program components annually revert to Traditional Enhancement for new awards in that component; (c) the difficulty and uncertainty surrounding moving Board of Regents Support Fund money from one BoRSF program budget to another, once budgeted in the prior year's appropriation process; and (d) the fact that all projects of this nature contain elements, in varying degrees, that enhance academic departments and units at colleges and universities.

After weighing interrelations among the four components of the Support Fund, the Board has concluded that enhancement of the instructional and research infrastructure of departments and units remains a fundamental need, essential to accomplishing goals of the other three BoRSF components. For this reason, the Board shall dedicate \$12,652,646 to the Enhancement Program in FY 2011-12. Thus, approximately 51% of the total funds available for awards in FY 2011-12 have been dedicated to this component, reflecting the Board's strong commitment to the program which provides competitive opportunities to all Support Fund-eligible colleges and universities in the State.

Approximately \$4,175,000 of the \$12,652,646 budgeted for Enhancement awards in FY 2011-12 will be required to honor prior commitments for multi-year projects. Of this amount, \$300,000 has been budgeted for potential second-year commitments for two-year proposals to be approved in FY 2010-11 under the Traditional and/or Undergraduate Enhancement programs. Traditional and Undergraduate Enhancement proposals submitted in this fiscal year are currently undergoing competitive external review and the Board will make funding decisions in April or May of 2011. A total of \$3,375,000 has been pledged as the State's matching commitment under four current jointly funded Board of Regents Support Fund/Federal Matching Grants, including: (a) \$250,000 for the second year of the NASA LaSPACE project; (b) \$500,000 for the second year of

the LAMP Phase IV project; (c) \$625,000 for the third year of the NASA EPSCoR project; and (d) \$2,000,000 for the third year of the NSF EPSCoR RII. Additionally, \$500,000 is reserved for the LaSIP project.

After deducting these projected commitments for multi-year enhancement projects and the prior and projected obligations for Federal matching opportunities, \$7,727,646 will be available for new enhancement projects submitted for funding consideration in FY 2011-12. Maintenance of the highest possible budgetary allocations to the Enhancement programs is particularly important because: (a) the Enhancement programs build the infrastructure at universities which is critical to the success of the other three Support Fund programs; and (b) not only are the Enhancement programs the ones in which all universities are eligible to compete, they are also the ones under which the majority of campuses most successfully compete. Significantly, 60% of the total funds available for new awards will be dedicated to Enhancement programs. (See Table II, "An Overview of Board of Regents Support Fund Budgetary Allocations by Program Component, FY 2011-12" in Section 6 of this Plan and Budget.)

5.5.1 Undergraduate Enhancement Program

Some colleges and universities without sizeable graduate programs are not as successful competing against larger universities with greater resources and as a result have been less aggressive in submitting Enhancement proposals. To continue to affirm the principle that improvement of infrastructure is essential at all academic levels, the Board shall dedicate \$1,620,000 to improve education at primarily undergraduate institutions.

Prerequisites for participation in the Undergraduate Enhancement Program are as follows: (1) the campus may not offer more than two doctoral programs, and (2) the department applying may not offer a doctoral degree. It should be noted that the maximum number of doctoral programs a campus may offer and still be eligible to participate in the Undergraduate Enhancement Program was lowered from ten in FY 1991-92 to two in FY 1992-93 and beyond. The Board took this action to promote maximum participation in this program by primarily undergraduate campuses.

Participation in Undergraduate Enhancement does not preclude campuses from competing for other Enhancement funds, and quality considerations continue to form the basis for all funding decisions. The same rotation of disciplines (Schedule III) and types of projects eligible under the Traditional Enhancement Program, as well as the same regulations for proposal submission, also apply in Undergraduate Enhancement. Funds not awarded in Undergraduate Enhancement will be transferred to the Traditional Enhancement Program.

5.5.2 Endowed Professorships Program

This program was created by the Board and incorporated into the Enhancement component in FY 1990-91. Funds were first allocated to endow professorships in FY 1991-92. The funding of an endowed professorship requires the college or university to raise at least \$60,000 from external sources, to be matched by \$40,000 from the Support Fund, thus establishing an endowed professorship valued at a minimum of \$100,000.

Since the program's inception the Board has been concerned that too many eligible campuses do not reap its benefits. One manifestation of this concern appeared in the FY 1995-96 Plan and Budget, when the Board first allowed campuses to use Federal funds as the matching source for one endowed professorship per year. The Board has also encouraged campuses to maximize efforts to attain matching funds for endowments from private philanthropic sources.

This year, as in previous years, the Board searched to identify money in the Support Fund to support this program at traditional levels. Measured against pressing financial needs throughout higher education, every component of the Support Fund is severely underfunded. Consequently, each dollar used to fund endowments means that fewer dollars are available for critical, immediate needs elsewhere. In FY 2010-11, the Board continued to fund the Endowed Professorships Program at a level of \$2,680,000. This level of funding, traditional for the program, gave each four-year campus the opportunity to endow two professorships and each two-year campus to endow one professorship provided matching funds were secured. In several years campuses were able to receive more than two Professorships when slots were unclaimed. In addition, in FY 1995-96 and several subsequent years, the Legislature approved special appropriations to fund unmatched Professorships. Given recent changes in the market that have led to limited returns on these smaller endowments, as well as the urgent needs throughout the higher education community, the Board shall fund the Endowed Professorships Program during FY 2011-12 at the level of \$1,560,000. These funds will guarantee that each eligible four-year and two-year campus is able to endow one \$100,000 professorship, assuming that private matching monies are secured and program requirements are met.

5.5.3 Enhancement Program for Two-Year Institutions

The Board's commitment to improvement of educational quality at all academic levels and in all disciplines drove the establishment, beginning in FY 2002-03, of the Enhancement Program for Two-Year Institutions. The absence in FY 2002-03 of Federal calls for grants requiring a state match enabled the Board to use funds normally made available for matching opportunities to "jump-start" the two-year institutions, particularly those which had recently joined the Louisiana higher education system.

Eleven campuses are eligible for participation in this program: Baton Rouge Community College, Bossier Parish Community College, Delgado Community College, L. E. Fletcher Technical Community College, Louisiana Delta Community College, LSU-Eunice, Nunez Community College, River Parishes Community College, South Louisiana Community College, Southern University-Shreveport, and SOWELA Technical Community College. Eligible campuses and the Louisiana Community and Technical College System (LCTCS) participated during the spring of 2002 in the development of rigorous criteria which parallel, to the degree feasible, the criteria used in other BoRSF Enhancement components. A competitive peer-review process is used to assess and prioritize proposals for funding.

The Board has concluded that proceeding in this manner will provide not only an opportunity for the two-year institutions to participate meaningfully in the BoRSF, but also an invaluable training experience in the grant writing and capacity building that all institutions of higher education should and must undertake. Cognizant that all or most of the BoRSF monies dedicated to this subprogram in FY 2002-03 were likely to revert to the Federal Matching Grants Program in future years, the Board provided a financial foundation for the continuance of the subprogram by modifying its policy for the disbursement of funds for endowed professorships (described in Section 5.5.2 above). By guaranteeing two-year campuses only one Endowed Professorship per year, the Board ensured that at least \$440,000 per year would be available to sustain this program. Additional funds were taken from the Traditional Enhancement Program. In FY 2003-04, \$1,000,000 was allotted to the Enhancement Program for Two-Year Institutions, and its FY 2004-05 allocation was raised to \$1,200,000. The \$1,200,000 level was maintained for FY 2005-06. The FY 2006-07 level of \$1,080,000 reflected a reduction of 10% to provide funds for the Post-Katrina Support Fund Initiative, and was sustained in subsequent years. In the FY 2010-11 Plan and Budget, the \$1,200,000 funding level was restored. Given the lower income projections for the BoRSF in FY 2011-12, the first-year funding level of \$1,080,000 will be reinstated for FY 2011-12. Any unexpended funds will revert to the Traditional Enhancement Program.

5.5.4 The Louisiana Systemic Initiatives Program (LaSIP)

The Louisiana Systemic Initiatives Program (LaSIP) first competed successfully for National Science Foundation (NSF) funding in 1991. At that time it received \$10 million from NSF, matched by \$5 million each from the Board of Regents and the Board of Elementary and Secondary Education (BESE). The project supports K-12 reforms which require leadership from colleges and universities, as well as revisions in teacher education programs. LaSIP was one of only two statewide initiatives (the other was in Connecticut) which received a five-year renewal in 1996. From the beginning, NSF emphasized that Federal money would only be used to seed the project, with the major continuing financial commitment to emanate from state and/or private sources. Although direct NSF support ended in FY 2000-01, LaSIP has been awarded approximately \$70 million in competitive Federal grants to further school reforms in Louisiana.

During its ten years of Federal support, LaSIP was repeatedly cited by NSF as a model program. The project's exemplary performance was a major contributing factor in the 1996 renewal. During and since Federal funding, LaSIP has achieved significant results statewide in the improvement of student scores on both criterion-referenced and norm-referenced tests. It has been and continues to be a major resource for school districts throughout the State in achieving accountability goals.

Mindful that Federal funding for this project was drawing to a close, the Board determined that the educational reform impulse at once spearheaded and buttressed by LaSIP should not die. Accordingly, the Board committed \$500,000 per year for five years, beginning in FY 2001-02, to continue LaSIP activities. The money came from the BoRSF Reserve Fund, and was contingent upon the provision of a like sum annually from BESE and supplemental funding from the Legislature. Both the Board of Regents and BESE approved five-year renewals of LaSIP at \$500,000 per year at their meetings in January 2006. Since FY 2006-07, the Board's contribution to this program has come from the BoRSF Plan and Budget. Upon expiration of the most recent five-year agreement and the elimination of legislative funding for LaSIP, the Board of Regents and BESE are continuing their support on an annual basis. In this context, \$500,000 will again be devoted to LaSIP from the Support Fund during FY 2011-12.

5.5.5 Endowed Undergraduate Scholarship Program for First-Generation College Students

The State faces a well-documented crisis in terms of educating its future workforce. According to statistics provided by the National Center for Higher Education Management Systems (NCHEMS), for every 100 students entering the ninth grade this fall only about 58 will graduate from high school four years hence. Only 38 will enter college immediately after graduation, and a meager 15 of these will earn a degree or certificate within 150% of the standard time to completion. Research indicates that this massive "pipeline leakage" is due primarily to socioeconomic factors. Many worthy Louisiana students are now effectively denied the opportunity for a post-secondary education either because the assistance provided under the TOPS program is not sufficient to make college affordable for them or because they approach but fall short of satisfying all of the requirements necessary to qualify for the TOPS program.

In FY 2007-08, the Board implemented a merit- and needs-based program to help address this situation. To be eligible, students must be Louisiana residents who are "first-generation" college students (i.e., neither parent has earned a baccalaureate degree), have been awarded the Federal Pell grant, and have been admitted to the institution awarding the scholarship. Each four-year institution is guaranteed one (1) \$40,000 endowed scholarship fund challenge grant annually to match a private/institutional contribution of \$60,000. Each two-year institution is guaranteed one (1) \$20,000 endowed scholarship fund challenge grant annually to match a private/institutional contribution of \$30,000. Proceeds will be used to establish/enhance a permanent endowed

scholarship fund. The interest earnings from the fund(s) are awarded at the discretion of the institution to eligible students and may be divided among multiple recipients, provided that each student receives at least \$1,000 per year in program funds. In addition to scholarship proceeds, institutions must provide student recipients with structured support through active and engaged advising, as well as meaningful campus employment of at least ten (10) hours per week over and above the scholarship. The program will be funded at a level of \$1,000,000 during FY 2011-12.

5.5.6 Traditional Enhancement Program

Based on its continuing review of academic programs, coupled with evaluation of BoRSF projects and the rapid advancement of technology across all disciplines and levels of postsecondary education, the Board anticipates that the acquisition of instructional and research equipment will remain indefinitely as the area of greatest need in the Enhancement Program. During the first three years in which the BoRSF operated, instrumentation was the only type of request allowed in the Enhancement Program. Beginning in FY 1989-90, the Board invited the submission of other types of enhancement requests, due primarily to the eligibility for the first time of selected non-scientific and non-engineering disciplines. Types of non-instrumentation enhancement requests include curriculum revision projects and colloquia to be presented by outstanding out-of-state scholars.

In an attempt to limit the obligation of future BoRSF money, in FY 1989-90 the Board further decided that equipment may only be purchased in the initial year of a project and that, for projects which envision multi-year funding, the following stipulations apply: (1) no project may be of more than two years in duration; (2) no project may request more than \$50,000 in the second year; and (3) a limit of \$1 million will be placed on the total of all second-year commitments in the Traditional Enhancement Program. This year, the Board will continue to allow the submission of Enhancement requests other than for instrumentation, with the same stipulations as adopted previously.

After deducting all previous and projected commitments for other components of the Enhancement Program, only \$2,467,646 remains for new projects submitted in the Traditional Enhancement Program, including the Multidisciplinary component (see Section 4.3) in FY 2011-12. This amount may increase from the Plan and Budget as submitted if allocated money is not expended in one of the other Support Fund programs. However, as indicated in section 5.1, all income in excess of \$25,600,000 shall be placed in the Traditional Enhancement category until a funding level of \$8,000,000 is reached. Further, the Board will use money from the BoRSF Reserve Fund as required to preserve the integrity of this vital component.

In keeping with the conceptual framework of using Support Fund money to enhance all areas of higher education, all disciplines are eligible to compete in the Traditional and Undergraduate Enhancement Programs on a rotating basis as set forth in the Support Fund strategic plans. Schedule III indicates the discipline eligibility cycle, including those disciplines eligible in FY 2011-12.

SCHEDULE III: ELIGIBILITY OF DISCIPLINES* IN THE TRADITIONAL AND UNDERGRADUATE ENHANCEMENT PROGRAMS

GROUP I - ELIGIBLE IN FYs 2009-10, 2012-13, 2015-16

Agricultural Sciences
Arts
Earth/Environmental Sciences
Engineering A (Chemical, Civil, Electrical, etc.)
Health and Medical Sciences

GROUP II - ELIGIBLE IN FYs 2010-11, 2013-14, 2016-17

Business
Chemistry
Education
Mathematics
Physics/Astronomy

GROUP III - ELIGIBLE IN FYs 2008-09, 2011-12, 2014-15

Biological Sciences
Computer and Information Sciences
Engineering B (Industrial, Materials, Mechanical, etc.)
Humanities
Social Sciences

* Attachment III provides a listing of those sub-disciplines which are included in these larger groupings.

5.5.7 Post-Katrina Support Fund Initiative (P-KSFI)

The storms of August and September 2005 decimated Louisiana and other areas across the Gulf Coast. In addition to and in part because of the dispersal of a large percentage of its population, the State's economy, infrastructure, tax base, and research capacity, both basic and applied, have suffered. The affected region encompasses coastal areas unmatched in natural and cultural resources. While the catastrophic dimensions of the storms would be difficult to overstate, the resulting situation did present an unprecedented opportunity for faculty and students to participate in the recovery and rebuilding of both urban and rural areas.

To help address post-Katrina research and educational priorities, the Board established, at its December 8, 2005 meeting, a five-year program to be funded through an annual allocation of approximately \$5 million from the Support Fund. This new program, the Post-Katrina Support Fund Initiative, required redirection of substantial funds from established BoRSF programs. Utilizing budget adjustments in established programs as well as monies unspent in the FY 2005-06 competitions, the Board was able to fund long-term projects with strong potential to contribute to economic development, research capacity, and educational quality.

Subsequent to the submission of the FY 2006-07 Plan and Budget, the Board's staff conducted several meetings with campus representatives, ultimately resulting in a call for White Papers from the campuses which indicated their priority needs, as well as their thoughts relative to the development of the Initiative. The Board's staff engaged a panel of experts selected under the auspices of the American Academy for the Advancement of Sciences (AAAS) to review these White Papers, interview stakeholders from throughout the State, and make recommendations to the Board related to the structure and purpose of the Initiative. AAAS issued final reports in November 2006 which recommended the following: (1) that the P-KSFI be subdivided into Primarily Research and Primarily Education subprograms, and (2) that the disciplines eligible for funding be limited to biological sciences, material sciences, and information technology. After responses to the report were received from the campuses in December 2006, the Board approved the requests for proposals (RFPs) for the Initiative at its meeting of January 25, 2007.

Forty-one proposals were submitted in response to the RFPs. An intensely competitive peer-review process, multi-stage for primarily research proposals and single-stage for primarily education proposals, culminated in the awarding of \$25,231,210 over a period of five years to eleven projects involving participation of fifteen institutions of higher education. In FY 2011-12, the projects will enter their final (fifth) year. Funds were committed from FY 2006-07 through FY 2010-11, so no monies are allocated out of the FY 2011-12 BoRSF budget for the P-KSFI.

A comprehensive mid-course assessment took place during November 2010, to evaluate both the success of the program as a whole and individual projects' progress toward meeting established goals. Two teams of experts assessed the subprograms and submitted detailed reports to the Board of Regents. Both teams found that the subprograms had yielded strong results and the projects had been highly successful through their first three years. Of particular note, the evaluations revealed that P-KSFI projects have already significantly leveraged BoRSF funds to attain Federal and private monies. In the Primarily Research Subprogram, a Support Fund investment of \$12.4 million over the first three years has generated \$105 million in external monies. Thus, the return on investment, even at the midpoint of these five-year awards, is approximately \$8.50 for every BoRSF dollar spent. The performance of these projects will continue to be carefully monitored and evaluated by the Board until receipt and satisfactory review of the final reports.

5.5.8 Summary of FY 2011-12 Enhancement Expenditures

<u>Prior Commitments:</u>	Traditional and Undergraduate Enhancement	\$ 300,000
	Federal Matching Grants	\$ 3,375,000
	LaSIP	\$ 500,000
<u>New Awards:</u>	Federal Matching Grants	\$ 750,000
	Undergraduate	\$ 1,620,000
	Endowed Professorships	\$ 1,560,000
	Two-Year Institutions	\$ 1,080,000
	Endowed Undergraduate Scholarships	\$ 1,000,000
	Traditional	<u>\$ 2,467,646</u>
ENHANCEMENT PROGRAM TOTAL		\$12,652,646

5.6 ADMINISTRATIVE EXPENSES - \$996,354

Act 675 of 1989 established the following restrictions with respect to the amount of Support Fund money that may be used to administer BoRSF programs:

No more than 3% of the annual total amount appropriated to each board or eight hundred thousand dollars, whichever is smaller, shall be appropriated for such purposes to each board, subject to a thorough review with the goal of limiting such costs to those necessary and proper...

This legislation was modified by Act 698 of 2001, which specifies:

Costs attributable to the Board of Regents for use of external peer-review consultants for purposes of review, evaluation, and assessment of program proposals are recognized as costs appropriately borne by the respective Support Fund programs and shall be paid from the category of expenditure related to the program for which the review, evaluation, and assessment applies.

Act 703 of 2006 further allows the Board of Regents Support Fund administrative budget to be determined by formula:

No more than three percent of the average annual amount of actual expenditures... for the most recent three previous fiscal years for which actual expenditures are available shall be appropriated for such [administrative] purposes.

This formula yields an actual amount of \$996,354 to be expended in this category during FY 2011-12.

Each program component whose expenditures are itemized in sections 5.4 through 5.5 of this Plan and Budget will incur expenditures for the professional services of out-of-state consultants, estimated as follows:

Research and Development	\$150,000
Enhancement	\$ 95,000

The amounts estimated above will be deducted from the total amounts available for expenditure in respective program components. Estimated consultant costs for the Endowed Chairs for Eminent Scholars Program are added to the regular allocation to preserve the \$400,000 units necessary for the endowments. Estimated costs for the review of Graduate Fellows subprograms are also added to the regular allocation since all funding for FY 2011-12 exists as prior commitments.

6. OVERVIEW OF FY 2011-12 BUDGETARY ALLOCATIONS BY PROGRAM COMPONENT

Table II provides an overview of FY 2011-12 Board of Regents Support Fund budgetary allocations for new projects and previous commitments.

TABLE II

AN OVERVIEW OF BOARD OF REGENTS SUPPORT FUND BUDGETARY ALLOCATIONS BY PROGRAM COMPONENT, FY 2011-12			
	TOTAL SUPPORT FUND ALLOCATION	ALLOCATION FOR NEW PROJECTS	ALLOCATION FOR PREVIOUS COMMITMENTS
ENDOWED CHAIRS	\$ 3,220,000	\$ 3,220,000	\$ 0
GRADUATE FELLOWS	\$ 3,846,000	\$ 1,150,000*	\$ 3,846,000
RESEARCH & DEVELOPMENT	\$ 4,885,000	\$ 2,385,000	\$ 2,500,000
ENHANCEMENT**	\$12,652,646	\$ 8,477,646	\$ 4,175,000
SUBTOTALS	\$24,603,646	\$14,082,646	\$10,521,000
ADMIN. COSTS	\$ 996,354		
GRAND TOTAL	\$25,600,000		

*Because allocations for the Graduate Fellows Program must be determined two years in advance of when students first arrive on campus, the FY 2011-12 allocation for new graduate fellowships was determined in FY 2009-10 and set forth for the first time in the FY 2010-11 Plan and Budget. Thus, this allocation for new projects must come from the FY 2012-13 budget and has not been included in the subtotal and grand total figures in this table. See Section 5.3 for a detailed explanation of the timing of the allocation process for this Board of Regents Support Fund component.

**Enhancement figures also include funds used for Federal Matching Grants opportunities.

ATTACHMENT I

FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
NSF/LaSER: The Louisiana EPSCoR Program	FY1989-90 – FY1992-93	STI-8820219	NSF	3 years	\$1,945,312	\$3,374,355
Participating Institutions: A significant number statewide; grant funds awarded on a competitive basis. Description/Purpose: 1) To increase the competitiveness of Louisiana scientists and engineers in the Federal R & D marketplace, 2) to effect permanent improvements in the quality of science and engineering in Louisiana, 3) to develop human resources in Louisiana in the sciences and in engineering, and 4) to ensure that improvements achieved continue with State and/or private support beyond the end of the grant period.						
NSF LaSER Advanced Development Proposal (ADP)	FY1991-92 – FY1994-95	EHR-9108765	NSF	3 years	\$3,700,000	\$4,800,000
Participating Institutions: A significant number statewide, organized into research clusters; grant funds awarded on a competitive basis. Description/Purpose: 1) To increase the competitiveness of Louisiana scientists and engineers in the Federal R & D marketplace, 2) to effect permanent improvements in the quality of science and engineering in Louisiana, 3) to develop human resources in Louisiana in the sciences and in engineering, and 4) to ensure that improvements achieved continue with State and/or private support beyond the end of the grant period.						
Louisiana Systemic Initiatives Program (LaSIP) in Math and Science Education	FY1991-92 – FY1995-96	TPE-9150043	NSF	5 years	\$10,000,000	\$10,000,000 (\$5 million each from Regents and BESE)
Participating Institutions: A significant number statewide; grant funds awarded on a competitive basis. Description/Purpose: To reform statewide – from kindergarten through college – methods of instruction and learning in mathematics, science, and engineering education.						
NASA Training Grant (LaSPACE)	FY1991-92 – FY1995-96	NGT-40039	NASA	4 years	\$600,000	\$500,000 (NASA and BOR portions awarded directly to LSU)
Participating Institutions: A consortium of sixteen campuses; grant funds awarded on a competitive basis. Description/Purpose: To develop the infrastructure for aerospace research to competitive levels, while improving the quality of aerospace research and education.						
Louisiana Collaborative for Excellence in the Preparation of Teachers (LaCEPT) Program	FY1992-93 – FY1996-97	DUE-9255761	NSF	5 years	\$4,000,000	\$2,500,000
Participating Institutions: Centenary, Grambling, LSU-BR, LSU-S, LA Tech, Loyola, McNeese, Nicholls, ULM, NSU, SLU, SUBR, SUNO, ULL, UNO, Xavier Description/Purpose: To improve the quality of undergraduate teacher preparation programs in mathematics and science and to increase substantially the number of mathematics and science educators.						
U.S. Department of Energy/EPSCoR Program	FY1993-94 – FY1994-95	DE-FC02-91ER75669	DOE	2 years	\$1,039,590	\$1,039,590
Participating Institutions: Grambling LA Tech, LSU-BR, Loyola, McNeese, SUBR, Tulane, ULL, ULM, UNO, Xavier Description/Purpose: To develop the infrastructure for energy and energy-related research in Louisiana, while improving the quality of energy research and education in the State and encouraging human resource development in this area. This proposal was the result of a one-year \$99,454 planning grant awarded to the Board by DOE.						

Page 2 of 10

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Defense Experimental Program to Stimulate Competitive Research (DEPSCoR) Planning Program	FY1993-94	DAAH04-93-G-0466	DOD	1 year	\$50,000	\$25,000
Participating Institutions: A significant number statewide Description/Purpose: To prepare a statewide plan for increasing the State's capacity to perform defense-related research and technology transfer.						
1993 DEPSCoR Implementation Program	FY1994-95 – FY1996-97	Grant Numbers vary	DOD	3 years	\$2,400,000	\$500,000
Participating Institutions: Dillard, Grambling, LSU-BR, LSUHSC-NO, SUBR, SUNO, Tulane, ULM, UNO, Xavier Description/Purpose: To conduct research and educate scientists and engineers in Louisiana in areas important to national defense.						
NASA EPSCoR Program	FY1994-95 – FY1996-97	NCCW-0059	NASA	3 years	\$1,500,000	\$1,500,000
Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier Description/Purpose: 1) To improve the infrastructure for aerospace-related research and education in Louisiana, and increase the State's capability to perform Federally funded aerospace research; and 2) to support three multi-institutional research cluster projects.						
NSF Teaching Scholars Program	FY1994-95 – FY1998-99	DUE-9255761 (Supplement)	NSF	5 years	\$500,000	\$250,000
Participating Institutions: Centenary, LA Tech, Loyola, Nicholls, SLU, SUBR, SUNO, ULL, ULM, UNO, Xavier Description/Purpose: To increase the number of minority teachers by providing a financial supplement to the Teaching Scholars program for Historically Black Colleges and Universities (HBCUs).						
NSF/EPSCoR LaSER Systemic Improvement Program (SI)	FY1995-96 – FY1997-98	OSR-9550481	NSF	3 years	\$4,400,000	\$3,000,000
Participating Institutions: Grambling LA Tech, LSUHSC-S, LSU-BR, Loyola, SUBR, SUNO, Tulane, ULL, UNO, Xavier Description/Purpose: 1) To stimulate systemic and sustainable improvements in the science and technology enterprise by creating centers of research excellence in the State, improving the infrastructure for scientific and engineering research and education in Louisiana, and enhancing human resources development in the sciences and engineering, thereby increasing the State's capability to perform Federally funded research of economic importance to Louisiana; and 2) to create real and meaningful research linkages between the State's Historically Black and Majority White Campuses and Universities through Joint Faculty Appointments. This proposal continued the efforts begun under the EPSCoR ADP award described above.						

Page 3 of 10

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Building Research Partnerships with Audio/Video Conferencing Facilities	FY1996-97 – FY1998-99	EPS-9632665	NSF	2 years	\$494,198	\$0
Participating Institutions: LA Tech, LSU-BR, LSU Ag, LSUHSC-NO, NSU, SLU, SUBR, Tulane, ULL, ULM, UNO Description/Purpose: To promote research partnerships by establishing an inter-institutional audio/video (A/V) research communications network across Louisiana. The A/V network will enhance collaborative exchanges within and among the State's EPSCoR and EPSCoR associated schools and to promote new research partnerships by eliminating geographical (distance/separation) barriers.						
LaSERnet II Backbone for Institutions of Higher Education in Louisiana	FY1997-98 – FY1999-00	EPS-9720147	NSF	2 years	\$552,893	\$0
Participating Institutions: LA Tech, LSU-BR, LSUHSC-S, LSUHSC-NO, SLU, SUBR, Tulane, ULL, ULM, UNO Description/Purpose: To provide researchers in the State with a high-speed intra-state backbone for sharing resources and access to broad-band (Internet II) service and direct vBNS (very Broadband Network Service) connectivity.						
U.S. Department of Energy/EPSCoR Program Renewal	FY1995-96 – FY1998-99	DE-FC02-91ER75669	DOE	4 years	\$3,473,402	\$3,200,000
Participating Institutions: Grambling LA Tech, LSU-BR, Loyola, McNeese, SUBR, Tulane, ULL, ULM, UNO, Xavier Description/Purpose: 1) To increase research competitiveness and capabilities of Louisiana scientists and engineers in areas of importance to the State and the U.S. Department of Energy; 2) to educate and recruit individuals, especially minorities and women, to work in these areas in Louisiana; 3) to provide new technologies that lead to economic development in the State; and 4) to support three multi-institutional research cluster projects.						
Louis Stokes Louisiana Alliance for Minority Participation (LS-LAMP) Program	FY1995-96 – FY1999-00	HRD-9550765	NSF	5 years	\$5,944,914	\$2,249,280
Participating Institutions: Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUSBO, Tulane, ULL, UNO Description/Purpose: To increase the number of underrepresented minorities receiving B.S. degrees in science, engineering, and mathematics in Louisiana from the baseline rate of 610 annually to an annual rate of 1,110.						
NASA LaSPACE Renewal Program	FY1996-97 – FY1999-00	NGT-40039	NASA	4 years	\$600,000	\$400,000 (NASA and BOR portions awarded directly to LSU)
Participating Institutions: A consortium of sixteen campuses; grant funds awarded on a competitive basis Description/Purpose: To continue the development of the infrastructure for aerospace research to competitive levels, while improving the quality of aerospace research and education.						

Page 4 of 10

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Louisiana Systemic Initiatives Program (LaSIP) Renewal in Math and Science Education Participating Institutions: A significant number statewide; grant funds awarded on a competitive basis. Description/Purpose: To continue the education reform efforts begun under the original LaSIP program.	FY1996-97 – FY2000-01	ESR-9634088	NSF	5 years	\$7,000,000	\$10,000,000 (5\$ million each from Regents and BESE)
1995 DEPSCoR Implementation Program Participating Institutions: LSU-BR, LSUHSC-NO, SLU, Tulane Description/Purpose: To continue previous efforts to conduct research and educate scientists and engineers in Louisiana in areas important to national defense, thus improving the State's research infrastructure.	FY1996-97 – FY1998-99	Grant Numbers vary	DOD	3 years	\$2,350,303	\$1,500,000
NASA EPSCoR Program Renewal (2 years) Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier Description/Purpose: A renewal program to 1) continue to improve the infrastructure for aerospace-related research and education in Louisiana, and increase the State's capability to perform Federally funded aerospace research; and 2) to continue the support of three multi-institutional research cluster projects.	FY1997-98 – FY1998-99	NCC5-167	NASA	2 years	\$1,000,000	\$1,000,000
Delta Rural Systemic Initiative in Science, Mathematics, and Technology Participating Institutions: A significant number; all campuses are eligible to compete. Description/Purpose: To complement and supplement current statewide math and science education reform initiatives such as LaSIP and LaCEPT. A tri-state effort involving Louisiana, Mississippi, and Arkansas, it concentrates on professional development programs for teachers, pre-service enhancement programs for educators, leadership institutes for administrators, and acquisition of supportive hardware and software in an effort to impact 64 counties and/or parishes (22 school districts in 21 parishes within Louisiana) that are rural and have major economic problems.	FY1997-98 – FY2001-02	ESR-9700041	NSF	5 years	\$10,000,000 (\$2.46 million is Louisiana's share)	\$2,000,000 (divided equally between BOR and BESE)
Louisiana Collaborative for Excellence in the Preparation of Teachers (LaCEPT) Program Supplemental Award Participating Institutions: Grambling, LSU-BR, LSU-S, LA Tech, Loyola, Nicholls, NSU, SLCC, SLU, SUBR, SUNO, ULL ULM, UNO, Xavier Description/Purpose: To improve the quality of undergraduate teacher preparation programs in mathematics and science and to increase substantially the number of mathematics and science educators; to evaluate the effectiveness of the initial five-year award (FYs 1993-98).	FY1998-99 – FY2000-01	DUE-9816194	NSF	3 years	\$600,000	\$300,000

Page 5 of 10

<p>Participating Institutions: LSU-BR, Tulane, ULL</p> <p>Description/Purpose: To continue previous efforts to conduct research and educate scientists and engineers in Louisiana in areas important to national defense, thus improving the State's research infrastructure.</p>						
NSF/EPSCoR New Cooperative Agreement (NCA)s	FY1998-99 – FY2000-01	EPS-9720652	NSF	3 years	\$3,000,000	\$3,000,000
<p>Participating Institutions: A significant number statewide; grant funds awarded on a competitive basis.</p> <p>Description/Purpose: 1) To enhance the competitiveness of science and engineering (S&E) faculty of the State's higher education institutions by making them more competitive in gaining national research and development support, engaging them in science and technology transfer activities with business and industry, and helping them educate effectively large numbers of S&E students at both graduate and undergraduate levels; 2) to create real and meaningful linkages between the State's HBCUs and MWCUs through the Joint Faculty Appointments Program; and 3) to foster economic development in the state by facilitating, through various initiatives, interaction between business & industry, universities, and state government. This proposal continued the efforts begun under the EPSCoR ADP and SI awards previously described.</p>						
1999 DEPSCoR Implementation Program 3 years	FY1999-00 – FY2001-02	Grant numbers vary	DOD	3 years	\$1,459,473	\$189,798
<p>Participating Institutions: LSU-BR, LA Tech, UNO</p> <p>Description/Purpose: As in past DEPSCoR awards, the individual research projects funded through this award enhance the statewide research infrastructure improvement efforts.</p>						
Experimental Program to Stimulate Competitive Technology (EPSCoT)	FY1999-00 – FY2000-01	60NANB9D0005	Dept. of Commer ce	2 years	\$250,000	\$300,000
<p>Participating Institutions: A significant number statewide</p> <p>Description/Purpose: To develop and implement regional and statewide strategies to accelerate commercialization of university-based technologies, thus contributing to the economic development of the State.</p>						
NASA EPSCoR Program Continuation Funding	FY1999-00	NCC5-167	NASA	1 year	\$400,000	\$250,000
<p>Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier</p> <p>Description/Purpose: A renewal program to 1) continue to improve the infrastructure for aerospace-related research and education in Louisiana, and increase the State's capability to perform Federally funded aerospace research; and 2) to continue the support of three multi-institutional research cluster projects. This award is the sixth-year continuation of the NASA EPSCoR Program and NASA EPSCoR Program Renewal previously described.</p>						

Page 6 of 10

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
NASA EPSCoR Preparation Grant Program	FY1999-00	NCC5-393	NASA	1 year	\$225,000	\$100,000
Participating Institutions: A significant number statewide. Funds are competitively awarded. Description/Purpose: To allow Louisiana researchers to initiate contacts and promote collaborative research programs with NASA Centers and Enterprises, and begin research activities in areas of strategic importance to NASA in preparation for submission of a statewide proposal to NASA EPSCoR in 2001.						
NASA LaSPACE Continuation	FY2000-01 – FY2004-05	NGT5-40115	NASA	5 years	\$1,281,250	\$1,000,000
Participating Institutions: A consortium composed of sixteen campuses; grant funds are awarded on a competitive basis. Description/Purpose: This award continues the efforts begun under the original LaSPACE program and the LaSPACE renewal described previously.						
EPA EPSCoR 2000 Program –Coastal Monitoring	FY1999-00 – FY2000-01	R-82778501-0	EPA	2 years	\$483,939	\$500,000
Participating Institutions: LUMCON, Tulane (all data obtained will be made available to scientists and students throughout the state.) Description/Purpose: To establish and maintain a series of instrument platforms by which university scientists can monitor environmental variables in coastal Louisiana for research and educational needs, thus increasing the State's capability to compete for and perform Federally funded environmental research.						
Louis Stokes Louisiana Alliance for Minority Participation (LS-LAMP) Phase II	FY2000-01 – FY2005-06	HRD-000272	NSF	5 years	\$5,000,000	\$2,500,000
Participating Institutions: Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUSBO, Tulane, ULL, UNO Description/Purpose: To continue to increase the number of underrepresented minorities in Louisiana receiving B.S. degrees in science, engineering, and mathematics.						
NASA EPSCoR Preparation Grant Program Renewal	FY2000-01	NCC5-393	NASA	1 year	\$225,000	\$0
Participating Institutions: A significant number statewide. Funds are competitively awarded. Description/Purpose: To continue the efforts described above for the NASA EPSCoR Preparation Grant.						
NASA EPSCoR Program Continuation Funding (year seven) 1 year	FY2000-01	NCC5-167	NASA	1 year	\$400,000	\$0
Participating Institutions: Dillard, LA Tech, LSU-BR, LSU Ag, LUMCON, McNeese, SUBR, Tulane, UNO, Xavier Description/Purpose: This award is the seventh-year continuation of the NASA EPSCoR Program previously described.						

Page 7 of 10

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Video to the Desktop: A Louisiana Model	FY2000-01 – FY2001-02	EPS-0083089	NSF	2 years	\$494,450	\$0
<p>Participating Institutions: LA Tech, LSU-BR, LSU Ag, LSUHSC-NO, LSUHSC-S, NSU, SLU, SUBR, Tulane, ULL, ULM, UNO</p> <p>Description/Purpose: To promote research partnerships by establishing an inter-institutional H.323 research communications (videoconferencing) network, which will operate over existing Internet lines instead of over telephone lines, and allow desktop-to-desktop multimedia communications.</p>						
Louisiana EPSCoR Research Infrastructure Improvement (RII)	FY2001-02 – FY2003-04	EPS-0092001	NSF	3 years	\$9,000,000	\$3,000,000
<p>Participating Institutions: A significant number statewide, including LA Tech, LSUHSC-NO, UNO, Grambling, LSU-BR, SUBR, Tulane, Xavier, NSU, ULM. A portion of the grant funds will be awarded on a continuing, competitive basis</p> <p>Description/Purpose: This award funds the “Micro/Nano Technologies for Advanced Physical, Chemical, and Biological Sensors” research consortium in addition to a variety of initiatives to enhance the competitiveness of science and engineering (S&E) faculty of the State’s higher education institutions. This proposal continues the efforts begun under the EPSCoR ADP, SI, and NCA awards previously described.</p>						
NASA EPSCoR 2000	FY2001-02 – FY2003-04	NCC5-573	NASA	3 years	\$2,100,000	\$2,100,000
<p>Participating Institutions: LSU-BR, LUMCON, Tulane, Dillard, ULL, UNO, Xavier. A portion of the grant funds will be awarded on a continuing, competitive basis.</p> <p>Description/Purpose: 1) To develop and strengthen long-term academic research enterprises that will make significant contributions to the strategic research and technology priorities of NASA and, in turn, to contribute to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State; and 2) to support three multi-institutional research projects.</p>						
EPA EPSCoR 2001 Program – Climate Change	FY2002-03 – FY2003-04	R-82642001-0	EPA	2 years	\$494,195	\$494,542
<p>Participating Institutions: LUMCON, UL-Lafayette, LSUBR</p> <p>Description/Purpose: To enhance Louisiana’s capability for understanding and predicting the effects of climate change on the state’s coastal ecosystems, thus increasing the State’s capability to compete for and perform Federally funded environmental research.</p>						
Louisiana’s Strategic Infrastructure Improvement (LSII)	FY2003-04– FY2005-06	EPS-0346411	NSF	3 years	\$9,000,000	\$3,000,000
<p>Participating Institutions: A significant number statewide, including LSU-BR, LSUHSC-NO, SUBR, Tulane, ULL, ULM, UNO, Xavier. A portion of the grant funds will be awarded on a continuing, competitive basis.</p> <p>Description/Purpose: This award funds the “Center for Bio-Modular Multi-Scale Systems” in addition to a variety of initiatives to enhance the competitiveness of science and engineering (S&E) faculty of the State’s higher education institutions. This proposal continues the efforts begun under the EPSCoR ADP, SI, NCA, and RII awards previously described.</p>						

Page 8 of 10

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
NASA EPSCoR 2000 Renewal	FY2004-05 – FY2005-06	NCC5-573	NASA	2 years	\$986,236	\$986,560
Participating Institutions: LSU-BR, LUMCON, Tulane, Dillard, ULL, UNO, Xavier. A portion of the grant funds will be awarded on a continuing, competitive basis. Description/Purpose: A two-year renewal of the NASA EPSCoR 2000 Program to 1) To develop and strengthen long-term academic research enterprises that will make significant contributions to the strategic research and technology priorities of NASA and, in turn, to contribute to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State; and 2) to support multi-institutional research projects.						
DOE EPSCoR Implementation 2004	FY2004-05 – FY2006-07	DE-FG02-04ER46136	DOE	3 years	\$1,200,000	\$1,200,000
Participating Institutions: ULL, LSU-BR, SUBR Description/Purpose: To develop the infrastructure for energy and energy-related research in Louisiana, while improving the quality of energy research and education in the State and encouraging human resource development in this area. This award funds the multi-institutional, multidisciplinary research project entitled “Ubiquitous Computing and Monitoring System (UCoMS) for Discovery and Management of Energy Resources.”						
LAMP Phase III	FY2005-06 – FY2009-10	HRD-0503362	NSF	5 years	\$2,500,000	\$2,500,000
Participating Institutions: Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUSBO, Tulane, ULL, UNO Description/Purpose: To continue to increase the number of underrepresented minorities in Louisiana receiving B.S. degrees in science, engineering, and mathematics, and to transition at least 30% of these graduates to graduate school by 2010.						
NASA LaSPACE Continuation II	FY2005-06 – FY2009-10	NNG05GH22H	NASA	5 years	At least \$1,280,000	\$1,000,000
Participating Institutions: A consortium composed of sixteen campuses; grant funds are awarded on a competitive basis. Description/Purpose: This award continues the efforts begun under the original LaSPACE program and the LaSPACE renewals described previously.						
NASA EPSCoR Phase 3	FY2006-07 – FY2011-12	NNX07AL03A, NNX07AT62A, NNX07AT67A	NASA	6 years	\$2,175,000	\$2,125,000
Participating Institutions: LSU-BR, SUBR. A portion of the grant funds will be awarded to these and other institutions on a continuing, competitive basis. Description/Purpose: 1) To develop and strengthen long-term academic research enterprises that will make significant contributions to the strategic research and technology priorities of NASA and, in turn, to contribute to the overall research infrastructure, science and technology capabilities, higher education, and economic development of the State; and 2) to support two research projects of particular interest to NASA, one studying adhesively bonded joints in composite structures and one focusing on high-energy astrophysics.						

Page 9 of 10

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
Louisiana EPSCoR Research Infrastructure Improvement (CyberRII)	FY2006-07 – FY2008-09	EPS-0701491	NSF	3 years	\$9,000,000	\$3,000,000
<p>Participating Institutions: A significant number statewide, including LSU-BR, LSUHSC-NO, LA Tech, SUBR, Tulane, Tulane Health Sciences Center, Xavier, ULL, UNO. A portion of the grant funds will be awarded to these and other institutions on a continuing, competitive basis.</p> <p>Description/Purpose: The focus of this project is the development of multi-functional cyberinfrastructure (<i>CyberTools</i>) that will broadly enable significant advances in modern science and engineering. In addition, a variety of initiatives to enhance the competitiveness of science and engineering (S&E) faculty of the State's higher education institutions are also supported. This project continues the efforts begun under the EPSCoR ADP, SI, NCA, RII, and LSII awards previously described.</p>						
DOE EPSCoR Implementation Renewal	FY2007-08 – FY2009-10	DE-FG02-04ER46136	DOE	3 years	\$900,000	\$1,200,000
<p>Participating Institutions: ULL, LSU-BR, SUBR</p> <p>Description/Purpose: This is a three-year renewal of the DOE EPSCoR program, which seeks to develop the infrastructure for energy and energy-related research in Louisiana, while improving the quality of energy research and education in the State and encouraging human resource development in this area. This award funds the multi-institutional, multidisciplinary research project entitled "Ubiquitous Computing and Monitoring System (UCoMS) for Discovery and Management of Energy Resources."</p>						
NASA EPSCoR 2009 Research 3	FY2009-10 – FY2011-12	NNX09AP72A	NASA	3 years	\$750,000	\$750,000
<p>Participating Institutions: LSU-BR, SUBR.</p> <p>Description/Purpose: Support for a research project to develop thermal barrier coatings with high reflectance in both the visible and infrared bandwidth to reduce the thermal radiation transport. Such nano-structured TBCs would make significant contributions to NASA's efforts to develop advanced thermal barrier systems for jet engine propulsion.</p>						
NASA EPSCoR 2009 Research 4	FY2009-10 – FY2011-12	NNX10AP07A	NASA	3 years	\$750,000	\$750,000
<p>Participating Institutions: LSU-BR, LA Tech, SUBR.</p> <p>Description/Purpose: This research program will investigate existing and novel microorganisms with tolerances to cold, desiccation, and radiation as models for astrobiology. The expected outcomes include the development of fundamental astrobio logical concepts and operational capabilities that would promote the success of future NASA-driven life detection missions, inform policies on planetary protection, and lay the foundation for a new space research enterprise in Louisiana.</p>						
Louisiana EPSCoR Research Infrastructure Improvement (LA-SiGMA)	FY2009-10 – FY2013-14	EPS-1003897	NSF	5 years	\$20,000,000	\$10,000,000
<p>Participating Institutions: A significant number statewide, including LSU-BR, Grambling, LA Tech, SUBR, Tulane, Xavier, and UNO. A portion of the grant funds will be awarded to these and other institutions on a continuing, competitive basis.</p> <p>Description/Purpose: The research component of the NSF EPSCoR project will create the <i>Louisiana Alliance for Simulation-Guided Materials Applications (LA-SiGMA)</i>. Program objectives include: building the next generation of experimentally validated formalisms, algorithms, and codes for multiscale materials simulations; implementing them on present and next generation super-computers; and educating the next generation of a highly skilled workforce of materials scientists and engineers.</p>						

FUNDED PROPOSALS: JOINT FEDERAL/STATE PROGRAMS WITH STATEWIDE IMPACT
Page 10 of 10

Title	Fiscal Years	Federal Award Number	Federal Agency	Duration	Federal Award Amt.	Support Fund Match
NASA LaSPACE Renewal	FY2010-11 – FY2014-15	NNX10AI40H	NASA	5 years	At least \$3,145,000	\$1,250,000

Participating Institutions: A consortium composed of sixteen campuses; grant funds are awarded on a competitive basis.

Description/Purpose: This award continues the efforts begun under the original LaSPACE program and the LaSPACE renewals described previously.

LAMP Phase IV (Senior-Level Alliance)	FY2010-11 – FY2014-15	HRD-1002541	NSF	5 years	\$2,500,000	\$2,500,000
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Participating Institutions: Dillard, Grambling, LUMCON, LSU-BR, McNeese, Nunez, SUBR, SUNO, SUSBO, Tulane, ULL, UNO, Xavier

Description/Purpose: The purpose of the LAMP program is to increase the number of underrepresented minorities in Louisiana receiving degrees in science, engineering, and mathematics. Phase IV will continue a comprehensive set of institutional transformation and systemic mentoring activities, with special emphasis on the progression of minority STEM students to and through graduate school and their transition to research-based careers that include the professoriate.

ATTACHMENT II

Board of Regents Support Fund Results of Selected Projects

ENHANCEMENT

An Undergraduate Enhancement award at **Grambling State University** has helped to strengthen teaching and research capabilities by upgrading existing equipment and acquiring new equipment for undergraduate laboratories. With this new equipment, the Biological Sciences Department was able to provide hands-on lab experiences for students in upper-level and principles of biology courses. As a result of these experiences, four May 2010 graduates were admitted to doctoral and master's degree programs, and thirteen biology majors were accepted into high-quality summer research internships at various universities including LSU, Purdue, Baylor, Emory, the University of Illinois, and the University of Oregon. The equipment also facilitated faculty research, yielding during the grant period a research paper presentation, a published paper, and a summer research fellowship at Purdue. *{LEQSF(2009-10)-ENH-UG-20; Felix Ifeanyi, PI}*

Through a Traditional Enhancement award, a team at the **University of New Orleans** has established state-of-the-art facilities to support instruction and research in Information Assurance, an area focusing on the study, development, evaluation, and testing of security technologies to achieve secure data and information creation, storage, communication, sharing, and maintenance. The Enhancement award helped the program to equip two dedicated security units in the Department of Computer Science: the Network Security and Systems Administration Lab (NSSAL) and the Greater New Orleans Center for Information Assurance (GNO-CIA), as well as develop the only courses in the country in reverse engineering of malicious software. The facilities made possible by the Enhancement grant have also helped leverage \$600,000 in external funding, as well as several additional pending Federal grant proposals. Thanks to this support and related institutional investments, UNO is one of only 40 universities in the U.S. designated by the National Security Agency as a Center of Academic Excellence in Information Assurance Research (CAE-R). *{LEQSF(2009-10)-ENH-TR-79; Golden Richard, PI}*

An Information Assurance project at **Louisiana Tech University** funded through Traditional Enhancement provides an improved learning environment for College of Business faculty and students by furnishing state-of-the-art laboratories to support research and teaching. Information Assurance is a vital area for our technology-focused society. The more information is stored and accessible in digital form, the more vulnerable we are to information hijacking. Information Assurance provides a way of managing the risks inherent in storage and transmission of digital data, including related systems and processes. Like UNO, Louisiana Tech has developed impressive strength in Information Assurance, which is strongly enhanced by the three facilities established with Support Fund monies: the Mobile Base Lab, the Mobile Forensics Lab, and the

Virtual Lab. These facilities are used by seven undergraduate and five graduate courses, training the workforce of the future in critical areas of cyber security. The funds have also provided mobile capabilities that enable research and teaching to take place at Barksdale Air Force Base, a key research and educational partner. This increased capacity has put the Department on track to complete all six National Security Agency (NSA) certifications related to information assurance by May 2011, and positions Louisiana Tech to apply to become a Center of Excellence in Information Assurance Education and Information Assurance Research. This puts Louisiana Tech at the forefront of a crucial area for research and training in the 21st century. *{LEQSF(2009-10)-ENH-TR-37; Tom Roberts, PI}*

Fletcher Technical Community College has used funds from the Enhancement Program for Two-Year Institutions to strengthen partnerships with regional business and industry to respond effectively to labor market demand in all areas of machining. To meet employer needs and ensure students are prepared for the workforce, Fletcher developed an industry-designed 24-hour training course for computer numerically controlled (CNC) machining, an automated manufacturing method, as well as other in-demand machining areas including lathing and milling. Private-sector partners, in addition to assisting in the development of industry-related curricula, were active participants in grant activities, providing valuable technical expertise, resources, field visits, and facilities that enhanced course-based training. These true partnerships ensured that students learned the skills necessary to find employment upon completion of the curriculum, and the partners strongly encouraged Fletcher to seek additional resources to enhance program capacity. *{LEQSF(2009-10)-ENH-PEN-11; Sterling Aysen, PI}*

An Enhancement project held by the **Louisiana State University** Mathematics Department has made great strides in improving the mathematics and science/technology educational pipeline, a crucial element in Louisiana's burgeoning high-tech workforce. This project, which expands on a 2008-09 LaSIP-supported dual enrollment initiative of LSU, Southern University at Baton Rouge, and Southeastern Louisiana University serving 50 teachers from 30 Louisiana high schools, enabled 10 additional high school teachers to be enrolled into a one-week summer seminar to learn to teach an Advanced Math course. The project also funded presentations by the LSU Mathematics Circuit in three locations around Louisiana. These presentations led to large increases in the number of students participating in the LSU Math Competition and Math Circle, both initiatives to offer high school students an opportunity to listen to, think about and do mathematics with university faculty in formal and informal settings. In addition, the Enhancement funding supported a multi-institutional initiative providing over 1,500 Louisiana high school seniors and juniors with six hours of dual enrollment opportunities in College Algebra and Trigonometry, as well as access to advanced placement courses in math for hundreds more students. All of these activities are showing success in preparing students for college-level work in math, while providing opportunities that pique students' interest in pursuing math and science degrees and career paths. The Enhancement project activities were

important factors in the LSU Mathematics Department's winning of a \$3.7 million National Science Foundation (NSF) Vertical Integration of Research and Education in the Mathematical Sciences (VIGRE) award to institutionalize several programs sustained by BoRSF funding. *{LEQSF(2008-10)-ENH-TR-04; Scott Baldridge, PI}*

An Undergraduate Enhancement award at **Dillard University** has assisted in the foundation of the Small Business and Accounting Center (SBAC), which was established to improve the business instruction and service initiatives of the Division of Business. The Center plays a major role in both the University and the local community, providing employment for undergraduate students as well as accounting services and seminars to small businesses and self-employed individuals. In these roles, the SBAC has been instrumental in the revitalization of the heavily Katrina-damaged neighborhoods surrounding Dillard and the larger small business community in New Orleans. The SBAC provides seminars and forums for business owners to acquire essential general information regarding accounting, internal controls, and business planning. Business owners in need of more individual assistance also have access to one-on-one accounting and consulting services on an ongoing basis. These services are widely varied, offering help with creation and implementation of business plans, licensing, tax preparation/resolution and other issues. Through these services, the SBAC has increased workforce development opportunities for its students, providing hands-on training in business and accounting as well as opportunities to work in their fields of study. Ten students to date have been trained and serve as business consultants through the SBAC. These students have gained valuable experience through the program, and several have been recruited heavily by Fortune 500 companies and the Big Four accounting firms. *{LEQSF(2008-09)-ENH-UG-12; Kemberley Washington, PI}*

The Center for Cultural and Eco-Tourism at the **University of Louisiana at Lafayette** has made major strides in archiving, storing and making accessible Cajun and Creole folklore materials through a Traditional Enhancement grant. By supporting student personnel and necessary equipment and supplies, the Enhancement award increased the Center's ability to make its collection accessible to the public and to preserve threatened elements of the local Cajun and Creole heritage. The archives serve as a precious resource for professional musicians – young bands and Grammy-nominated performers alike – who benefit from hearing field recordings of local music dating from the 1920s to the present. Enhancement funding has helped the Center to increase accessibility of its materials with the release of two CDs of material from the archives with additional CDs in the planning stages, podcasts via the Center's website, a monthly lecture series, and increased digitizing of video, audio, and paper materials. By employing student workers, the Center also contributes to the development of a new generation of preservationists to work among Louisiana's vast historical treasures. Students are trained in all aspects of the Center's work: accessing information, preserving archive materials, donating to collections, and working with researchers and artists. The Center teaches them to work with industry-standard equipment and preserve their work according to archival standards. Through its range of

activities, the Center assures both that the Cajun and Creole heritage will be shared with future generations, and that highly trained individuals will be here to help continue the preservation of this essential part of Louisiana's culture. *{LEQSF(2009-10)-ENH-TR-68; Jennifer Ritter, PI}*

An award in the Enhancement Program for Two-Year Institutions has enabled **Southern University at Shreveport** to implement hands-on laboratory exercises designed to better prepare students in biomedical sciences for the workforce and baccalaureate/graduate education, as well as stimulate faculty research. Grant funds were used to develop a functional science lab in SUSLA's Division of Science and Technology, well equipped for research and training in a wide variety of biomedical sciences areas. Faculty have already developed and implemented experimental protocols to enhance instruction. Over 180 students from the Divisions of Nursing and Allied Health have already benefitted from this lab, and have achieved a 90-100% pass rate on national certification examinations. The availability of these hands-on educational opportunities help to ensure that Louisiana will have highly trained, well-prepared nurses and health technicians entering the workforce, as well as more competitive and engaged students transitioning to four-year and graduate degree work. *{LEQSF(2009-10)-ENH-PEN-15; John Alak, PI}*

The Department of History and Social Sciences at **Louisiana State University in Shreveport** has used an Undergraduate Enhancement award to update a GIS facility to improve remote sensing capabilities essential to archaeological and social sciences mapping and discovery. With the new equipment faculty and students have been able to locate several previously unexplored archaeological sites, including nineteenth-century building sites in the Ledbetter Heights neighborhood and unmarked graves in Shreveport's Oakland Cemetery. Teams of faculty and students also conducted a remote sensing survey of the Mansfield Civil War battlefield in DeSoto Parish to determine the extent of the battle area, as well as discovered early homesteads and a trading post during surveys in Caddo Parish. A survey in the Bayou Pierre settlement in northern DeSoto Parish helped save an unrecorded cemetery from planned development, which was diverted to preserve the site in situ. As this demonstrates, the survey activities made possible by Enhancement funding have already proven extremely valuable in mapping, recording and preserving historical sites and the cultural landscape throughout northern Louisiana, even as they assist developers and public works in making decisions about continuing development. *{LEQSF(2009-10)-ENH-UG-25; Gary Joiner, PI}*

RESEARCH AND DEVELOPMENT

Research Competitiveness Subprogram (RCS)

An RCS project at the **Pennington Biomedical Research Center** is developing methods to provide information on the fundamental aspects of protein folding, a study of critical importance to disease biology as well as for basic understanding of protein structure. The proteins on which this project is working are associated with Type 2 diabetes, a disease particularly prevalent in and damaging to Louisiana. Issues related to protein folding/misfolding are also important to understanding numerous other amyloid-associated diseases, such as Alzheimer's and Parkinson's. Not only does this research promise fundamental understanding of protein folding and related diseases, it will also provide insights into the function of existing and new drugs and treatments. The research has already yielded seven publications in prominent scholarly journals and six presentations at national and international meetings. Even at this early stage, Federal funding is significant, with \$500,000 awarded from the National Institutes of Health, with over \$800,000 pending and additional monies from the American Federation of Aging Research. In addition, the principal investigator has received \$60,000 from a private-sector company to support research activities related to the RCS project.

The project is collaborative in nature, allowing the principal investigator to work with graduate students, research staff, and faculty at LSU and other Louisiana universities. The investigator has trained students at all levels, including three research associates, three undergraduates, and two graduate students. *{LEQSF(2007-10)-RD-A-26; Indu Kheterpal, PI}*

Thanks in part to an RCS award, a research team at the School of Naval Architecture and Marine Engineering at the **University of New Orleans** is developing an integrated design system for a generation of ship hulls with minimized wash and wave resistance. Such a virtual design system, integrating advanced analysis tools and formal optimization at an early stage, enables many designs to be efficiently analyzed and compared before product engineering. This capability will help to improve the fuel efficiency of ships and minimize their impact on the shores of waterways, helping affected industries reduce both operating costs and the environmental impact of their activities, thus making them more competitive in the global maritime market. To date, the principal investigator has presented his research at two international events and project participants have generated five scholarly and technical publications. The project team has received funding from the National Science Foundation and the Office of Naval Research, and established a private-sector partnership that is actively seeking a Small Business Technology Transfer (STTR) grant. *{LEQSF(2006-09)-RD-A-34; Lothar Birk, PI}*

A principal investigator at the Institute of Micromanufacturing at **Louisiana Tech University** has increased his national competitiveness and become a leader in research and education related

to template wetting nanofabrication. Through the RCS award he has already established a new surface chemistry and micro- and nanochemical systems laboratory at Louisiana Tech, and recruited a strong research group of graduate and undergraduate students. These students are learning essential skills transferrable to the high-tech workforce. The principal investigator's work, though focused primarily on fuel cell catalysis, already has numerous potential applications including uses in fuel cell membranes, catalysts for chemical reactions, semiconducting nanostructures and devices, and biomedical testing devices. Based on technology developed through this award, a provisional patent application for a fuel cell membrane electrode assembly has been filed. This work is poised to make significant contributions to a number of important cutting-edge technology areas, from energy to biomedical innovation. *{LEQSF(2006-09)-RD-A-21; Scott Gold, PI}*

Through RCS funding, a principal investigator at **Louisiana State University** and his team of graduate students have successfully established a technical toolbox for nanoimprint lithography technology. This technology allows for the manipulation of matter at the nanometer scale at low cost and with high efficiency, providing a ready technology for reliable fabrication of micro- and nanostructures. The toolkit developed through this research is an important component of many potential electronic, chemical and biological advances. Based on the success of the research, the principal investigator has given numerous presentations at international conferences, published extensively, and received significant external funding as a principal investigator and as a co-investigator on collaborative projects. In a strong endorsement of the impact of his work, the principal investigator is the recipient of a National Science Foundation Faculty Early Career Development (CAREER) award, the most prestigious award bestowed on early-career scholars by NSF, given to "those teacher-scholars who are most likely to become the academic leaders of the 21st century." *{LEQSF(2006-09)-RD-A-09; Sunggook Park, PI}*

Industrial Ties Research Subprogram (ITRS)

A team of researchers at **Tulane University** has leveraged ITRS funding to establish the Tulane Center for Polymer Reaction Monitoring and Characterization (PolyRMC), the mission of which is to become the world's foremost center for polymer reaction monitoring and advanced characterization. The project has seen a number of strong academic results: nine presentations at national and international conferences and 20 publications in scholarly journals. But the project and the Center are also highly focused on interactions with business and industry, demonstrated by the fact that a significant fraction of PolyRMC funding is from private industry. This supports the Center's focus on deep collaborations between Louisiana's vast chemical industry and university polymer R&D capabilities. PolyRMC has already generated a local spin-off company, Advanced Polymer Monitoring Technologies, LLC, which plans to commercialize the technology developed by the principal investigator and his research group and owned by Tulane. The potential market for industrial polymerization monitoring and control is significant, and this

start-up is well positioned to contribute substantially to Louisiana's economy. *{LEQSF(2007-10)-RD-B-05; Wayne Reed, PI}*

An ITRS project at the **University of Louisiana at Lafayette** is working with waste products and residue generated by the food industry in south and central Louisiana to determine the viability of developing biofuels, including biodiesels, from these sources. The project has focused on residue from production of algal lipids, waste from chicken farms and the processing industry, fat waste from the alligator meat industry, and starchy waste from the canning and vegetable processing industries. Development of methods to convert waste from these industries into useable fuels will both assist the industries in meeting discharge standards and create a new and necessary product for the marketplace. In particular, the work done with alligator industry waste alone has the potential for becoming a source for a local, small-scale biofuels industry. The project has also worked with a Louisiana company to establish a pilot-sized algal farm. Based on the success of this pilot effort, the company intends to develop a large farm for eventual production of aviation fuel from algal oil. This project shows strong potential to contribute substantially to local and regional business and industry, as well as provide a model for adaptation in other regions. *{LEQSF(2007-10)-RD-B-07; Mark Zappi, PI}*

A researcher at **Louisiana State University** has leveraged ITRS funding and an existing industrial partnership into the foundation of a start-up company in Louisiana. This start-up, Enervana, was formed by the project research team to commercialize a metal-based microchannel heat exchanger for microelectronic chip cooling. Enervana has already secured an NSF Small Business Innovation Research (SBIR) Phase I grant, which also provided a subcontract to LSU. After attracting new investors and business partners, the SBIR grant was extended to Phase IB. The company is in the process of developing a SBIR Phase II proposal with the goal of commercializing the technology developed through ITRS support. Success of these commercialization efforts will create new high-tech jobs for Louisianians. *{LEQSF(2008-10)-RD-B-02; Wen Meng, PI}*

Awards to Louisiana Artists and Scholars (ATLAS) Subprogram

A jazz trumpet player/composer at the **University of New Orleans** and 2009 Grammy Award winner has used a one-year ATLAS award to complete a jazz suite titled *Elysian Fields*, that serves as a tribute to the victims of Hurricane Katrina – particularly his own father – and a poignant celebration of the rebirth of New Orleans. The piece, performed by the New Orleans Jazz Orchestra, premiered at UNO's Commencement exercises and in a free concert in New Orleans' Washington Square Park in May 2010. The Orchestra has gone on to perform the piece at festivals across the country and on an eight-city tour of Brazil throughout the summer and fall; their tour culminated in a performance at Carnegie Hall in New York. One reviewer has called the work "modern, thrilling, and swinging... absorbingly intelligent jazz." The piece, endorsed

by the French Consulate in New Orleans, is also set to be performed in Paris, France, on the Champs Elysées. {LEQSF(2009-10)-RD-ATL-10; Irvin Mayfield, PI}

An ATLAS principal investigator at **Louisiana State University** has won the American Historical Association's prestigious George L. Mosse Prize for her recent monograph *German Orientalism in the Age of Empire*, published by Cambridge University Press. The Mosse Prize is awarded annually to an outstanding major work of extraordinary scholarly distinction, creativity, and originality in the intellectual and cultural history of Europe since the Renaissance. In addition, the American Library Association selected the book from among 25,000 scholarly works for its "Outstanding Academic Titles of 2010" list. The PI used a one-year ATLAS award to complete work on the book and prepare it for publication. {LEQSF(2005-06)-RD-ATL-06; Suzanne Marchand, PI}

POST-KATRINA SUPPORT FUND INITIATIVE

Through a five-year P-KSFI Primarily Research Subprogram grant, a research team at **LSU Health Sciences Center – New Orleans** has established the Louisiana Vaccine Center (LVC), a Board of Regents-recognized Center of Excellence for vaccine research and development. This Center, funded with \$5.5 million from the P-KSFI, has leveraged \$51 million in new external grants from the National Institutes of Health and other Federal agencies. In addition, the LVC has shown strong early results from its research commercialization efforts, yielding 18 invention disclosures in vaccine-related research, four provisional patents, and one international patent cooperation treaty. Working with developing LVC research, one startup business has been incorporated, two additional business plans are in development, four industry partnerships have been established, and one SBIR/STTR grant has been attained. The LVC's ultimate goal, which it is well on the way to achieving, is to establish the Center as a major venue for vaccine-related research and development, with strong ties to Louisiana business and industry. {LEQSF(2007-12)-ENH-PKSFI-PRS-02; Alistair Ramsay, PI}

Thanks to five-year funding through a Post-Katrina Support Fund Initiative Primarily Education Subprogram award, **Xavier University of Louisiana** has restructured, streamlined, and improved the curricula for its General Biology courses. Prior to the grant, faculty had noted a marked decrease in student understanding of fundamental principles and a corresponding decline in performance as measured by test scores, grades and pass/fail rates. The funded P-KSFI project, "Biothrust 21, A Post-Katrina Recovery Initiative: Producing a Better Prepared 21st Century Biosciences Workforce for Louisiana and the Nation", proposed a creative approach to curricular redesign to accomplish three major goals: improvement of student learning and performance; improvement of student retention; and an increase in the number of graduates well-trained and ready to handle the needs of Louisiana and the nation in the ever-expanding field of

biological sciences. As a result of work undertaken with P-KSFI support, within three years student performance has shown dramatic improvement. General biology courses have seen steadily trending decreases in the percentage of failing and near-failing grades and corresponding increases in class grade point averages and course pass rates. The project leaders have also successfully integrated tutoring requirements for at-risk and low-performing students and new technology to measure and test student learning. Both of these elements have contributed measurably to student success. During a 2010 project assessment, the Xavier curriculum development project was praised by a team of external evaluators as a model for other biological sciences programs in need of redesign or restructuring. {LEQSF(2007-12)-ENH-PKSFI-PES-07; Shubha Ireland, PI}

Delgado Community College, in partnership with **Southeastern Louisiana University**, has used a four-year Post-Katrina Support Fund Initiative Primarily Education Subprogram award to establish an articulation program between the two institutions in the area of Computer and Information Sciences. The original intent of the grant was to respond to the setbacks caused by Katrina and help post-Katrina workforce development by increasing educational and training opportunities for students in the computer and information sciences. The project has focused on new courses and revised curricula as well as resource sharing at Delgado and Southeastern, which feed into an articulation agreement enabling students to transfer seamlessly from Delgado's two-year to Southeastern's baccalaureate programs. To date, both campuses have accomplished major curricular and course revisions, designed several new courses and concentrations, implemented targeted assessment methodologies, and upgraded facilities and equipment. Delgado has established a new web design and digital media lab and a start-up lab for information technology security/assurance and support. Southeastern has implemented the Network Systems Administration Laboratory, and integrated this new facility into curricular offerings, including tutoring support for Delgado students. During the final years of the grant, the partners are completing work on the articulation program and exploring further collaborations across departments and the institutions, to maximize the reach of this investment. In addition, the partners are preparing for the first students to enroll in the transfer program to move from Delgado to Southeastern. {LEQSF(2007-11)-ENH-PKSFI-PES-01; Warren Duclos, PI}

LOUISIANA EPSCoR

The Board of Regents has committed matching funds to a **Louisiana EPSCoR** program that in 2010 was awarded a five-year \$20 million grant from the National Science Foundation (NSF)—the largest single award ever made by NSF to Louisiana—for a major research and education project involving seven campuses. The researchers will leverage existing statewide computational, experimental, and intellectual assets to design useful, cost effective, and environmentally friendly new materials for specific tasks. The power of modern computers and

sophisticated computational tools will enable researchers to develop and test these materials quickly and economically using simulations. The institutions involved in the project, known as the Louisiana Alliance for Simulation-Guided Materials Applications, or LA-SiGMA, are: **Grambling State University, Louisiana State University – Baton Rouge, Louisiana Tech University, Tulane University, Southern University – Baton Rouge, the University of New Orleans, and Xavier University of Louisiana.**

Louisiana EPSCoR has also been successful in securing two additional EPSCoR awards in 2010: a \$2.1 million Research Infrastructure Improvement (RII) Track 2 project that, in conjunction with researchers in Alabama and Mississippi, establishes the Northern Gulf Coast Hazards Collaboratory to address engineering design, coastal system response, and risk management of coastal hazards; and a \$1.2 million RII Cyberinfrastructure Connectivity (C2) project to connect **Xavier University of Louisiana** to the Louisiana Optical Network initiative, or LONI.

In addition, in November 2010 the Louisiana Board of Regents and **Louisiana EPSCoR** program, in partnership with Mississippi and Alabama EPSCoR, hosted a national conference entitled “Collaborative Scientific Research in Relation to the Gulf Oil Spill.” The overriding purpose of the Conference was to promote and sustain interdisciplinary, collaborative research in areas related to the Gulf oil spill and its aftermath. The event was attended by 380 individuals representing universities throughout the Gulf Coast region and the nation, government agencies, private industry, and community groups.

ATTACHMENT III

TAXONOMY OF DISCIPLINES
USED IN THE
BOARD OF REGENTS SUPPORT FUND PROGRAMS

NATURAL SCIENCES - BIOLOGICAL

Agriculture

- 0101 Agricultural Economics
- 0102 Agricultural Production
- 0103 Agricultural Sciences
- 0104 Agronomy
- 0105 Animal Sciences
- 0106 Fishery Sciences
- 0107 Food Sciences
- 0108 Forestry and Related Sciences
- 0109 Horticulture
- 0110 Resource Management
- 0111 Parks and Recreation Management
- 0112 Plant Sciences
(Except Agronomy, see 0104)
- 0113 Renewable Natural Resources
- 0114 Soil Sciences
- 0115 Wildlife Management
- 0199 Agriculture - Other

Biological Sciences

- 0201 Anatomy
- 0202 Biochemistry/Biophysics
- 0203 Biology
- 0204 Biometry
- 0205 Botany
- 0206 Cell and Molecular Biology
- 0207 Ecology
- 0208 Embryology
- 0209 Entomology and Parasitology
- 0210 Genetics
- 0211 Marine Biology
- 0212 Microbiology
- 0213 Neurosciences
- 0214 Nutrition
- 0215 Pathology
- 0216 Pharmacology
- 0217 Physiology
- 0218 Radiobiology
- 0219 Toxicology
- 0220 Zoology
- 0299 Biological Sciences - Other

NATURAL SCIENCES -BIOLOGICAL (CONTINUED)

Health and Medical Sciences

- 0601 Allied Health
- 0602 Audiology and Speech Pathology
- 0603 Chiropractic
- 0604 Dental Sciences
- 0605 Environmental Health
- 0606 Epidemiology
- 0607 Health Science Administration
- 0608 Immunology
- 0609 Medical Sciences
- 0610 Nursing
- 0611 Optometry
- 0612 Osteopathic Medicine
- 0613 Pharmaceutical Sciences
- 0614 Podiatry
- 0615 Pre-Medicine
- 0616 Public Health
- 0617 Veterinary Science
- 0699 Health and Medical Sciences - Other

NATURAL SCIENCES - PHYSICAL

Chemistry

- 0301 Chemistry, General
- 0302 Analytical Chemistry
- 0303 Inorganic Chemistry
- 0304 Organic Chemistry
- 0305 Pharmaceutical Chemistry
- 0306 Physical Chemistry
- 0399 Chemistry - Other

Physics and Astronomy

- 0801 Astronomy
- 0802 Astrophysics
- 0803 Atomic/Molecular Physics
- 0804 Nuclear Physics
- 0805 Optics
- 0806 Planetary Science
- 0807 Solid State Physics
- 0899 Physics and Astronomy - Other

NATURAL SCIENCES - COMPUTATIONAL

Computer and Information Sciences

- 0401 Computer Programming
- 0402 Computer Sciences
- 0403 Data Processing
- 0404 Information Sciences
- 0405 Microcomputer Applications
- 0406 Systems Analysis
- 0499 Computer Sciences - Other

Mathematical Sciences

- 0701 Actuarial Sciences
- 0702 Applied Mathematics
- 0703 Mathematics
- 0704 Probability and Statistics
- 0799 Mathematical Sciences - Other

NATURAL SCIENCES - EARTH/ENVIRONMENTAL

Earth, Atmospheric, and Marine Sciences

- 0501 Atmospheric Sciences
- 0502 Environmental Sciences
- 0503 Geochemistry
- 0504 Geology
- 0505 Geophysics and Seismology
- 0506 Paleontology
- 0507 Meteorology
- 0508 Oceanography
- 0599 Earth, Atmospheric, and
Marine Sciences - Other
- 4403 Environmental Design
- 4405 Landscape Architecture

ENGINEERING - A

Engineering - Chemical

- 1001 Chemical Engineering
- 1002 Pulp and Paper Production
- 1003 Wood Science
- 1099 Chemical Engineering - Other

Engineering - Civil

- 1101 Architectural Engineering
- 1102 Civil Engineering
- 1103 Environmental/Sanitary Engr.
- 1199 Civil Engineering - Other

ENGINEERING - A (CONTINUED)

Engineering - Electrical and Electronics

- 1201 Computer Engineering
- 1202 Communications Engineering
- 1203 Electrical Engineering
- 1204 Electronics Engineering
- 1299 Electrical and Electronics
Engineering - Other

ENGINEERING - B

Engineering - Industrial

- 1301 Industrial Engineering
- 1302 Operations Research
- 1399 Industrial Engineering - Other

Engineering - Materials

- 1401 Ceramic Engineering
- 1402 Materials Engineering
- 1403 Materials Science
- 1404 Metallurgical Engineering
- 1499 Materials Engineering - Other

Engineering - Mechanical

- 1501 Engineering Mechanics
- 1502 Mechanical Engineering
- 1599 Mechanical Engineering - Other

Engineering - Other

- 1601 Aerospace Engineering
- 1602 Agricultural Engineering
- 1603 Biomedical Engineering
- 1604 Engineering Physics
- 1605 Engineering Science
- 1606 Geological Engineering
- 1607 Mining Engineering
- 1608 Naval Architecture and
Marine Engineering
- 1609 Nuclear Engineering
- 1610 Ocean Engineering
- 1611 Petroleum Engineering
- 1612 Systems Engineering
- 1613 Textile Engineering
- 1699 Engineering - Other

SOCIAL SCIENCES

Anthropology and Archaeology

- 1701 Anthropology
- 1702 Archaeology

Economics

- 1801 Economics
- 1802 Econometrics

Law (5102)

Political Science

- 1901 International Relations
- 1902 Political Science and Government
- 1903 Public Policy Studies
- 1999 Political Science - Other

Psychology

- 2001 Clinical Psychology
- 2002 Cognitive Psychology
- 2003 Community Psychology
- 2004 Comparative Psychology
- 2005 Counseling Psychology
- 2006 Developmental Psychology
- 2007 Experimental Psychology
- 2008 Industrial and Organizational Psychology
- 2009 Personality Psychology
- 2010 Physiological Psychology
- 2011 Psycholinguistics
- 2012 Psychometrics
- 2013 Psychopharmacology
- 2014 Quantitative Psychology
- 2015 Social Psychology
- 2099 Psychology - Other

Sociology and Social Work

- 2101 Demography
- 2102 Sociology
- 5001 Social Work

Social Sciences - Other

- 2201 Area Studies
- 2202 Criminal Justice/Criminology
- 2203 Geography
- 2204 Public Affairs and 4801 Public Administration
- 2205 Urban Studies and 4406 Urban Design
- 2299 Social Sciences - Other
- 4401 Architecture
- 4402 City and Regional Planning
- 4404 Interior Design

SOCIAL SCIENCES (CONTINUED)

Communications

- 4501 Advertising
- 4502 Communications Research
- 4503 Journalism and Mass Communication
- 4504 Public Relations
- 4505 Radio, TV and Film
- 4506 Speech Communication
- 4599 Communications - Other

Home Economics

- 4601 Consumer Economics
- 4602 Family Relations
- 4699 Home Economics - Other

Library and Archival Sciences

- 4701 Library Science
- 4702 Archival Science

ARTS

Arts - History, Theory, and Criticism

- 2301 Art History and Criticism
- 2302 Music History, Musicology, and Theory
- 2399 Arts - History, Theory, and Criticism - Other

Arts - Performance and Studio

- 2401 Art
- 2402 Dance
- 2403 Drama/Theatre Arts
- 2404 Music
- 2405 Design (including Industrial)
- 2406 Fine Arts
- 2499 Arts - Performance and Studio - Other

Arts - Other

- 2999A Arts - Other
- 5101A Interdisciplinary Programs

HUMANITIES

English Language and Literature

- 2501 English Language and Literature
- 2502 American Language and Literature
- 2503 Creative Writing
- 2599 English Language and Literature – Other

HUMANITIES (CONTINUED)

Foreign Language and Literature

- 2601 Asiatic Languages
- 2602 Foreign Literature
- 2603 French
- 2604 Germanic Languages
- 2605 Italian
- 2606 Russian
- 2607 Semitic Languages
- 2608 Spanish
- 2699 Foreign Languages - Other

History

- 2701 American History
- 2702 European History
- 2703 History of Science
- 2799 History - Other

Philosophy

- 2801 All Philosophy Fields

Humanities - Other

- 2901 Classics
- 2902 Comparative Language and Literature
- 2903 Linguistics
- 2904 Religious Studies; 4901 Religion; and 4902 Theology
- 2999H Humanities - Other
- 5101H Interdisciplinary Programs

EDUCATION

Education - Administration

- 3001 Educational Administration
- 3002 Educational Supervision

Education - Curriculum and Instruction

- 3101 Curriculum and Instruction

Education - Early Childhood

- 3201 Early Childhood Education

Education - Elementary

- 3301 Elementary Education
- 3302 Elementary-level Teaching Fields

EDUCATION (CONTINUED)

Education - Evaluation and Research

- 3401 Educational Statistics and Research
- 3402 Educational Testing Evaluation and Measurement
- 3403 Educational Psychology
- 3404 Elementary and Secondary Research
- 3405 Higher Education Research

Education - Higher

- 3501 Educational Policy
- 3502 Higher Education

Education - Secondary

- 3601 Secondary Education
- 3602 Secondary Level Teaching Fields

Education - Special

- 3701 Education of the Gifted
- 3702 Education of the Handicapped
- 3703 Education of Special Learning Disabilities
- 3704 Remedial Education
- 3799 Other Special Education Fields

Education - Student Counseling and Personnel Services

- 3801 Personnel Services
- 3802 Student Counseling

Education - Other

- 3901 Adult and Continuing Education
- 3902 Bilingual/Crosscultural Education
- 3903 Educational Media
- 3904 Junior High/Middle School Education
- 3905 Pre-Elementary Education
- 3906 Social Foundations
- 3907 Teaching English as a Second Language/Foreign Language
- 3999 Other Education Fields

BUSINESS

Accounting

- 4001 Accounting
- 4002 Taxation

Banking and Finance

- 4101 Commercial Banking
- 4102 Finance
- 4103 Investments and Securities

Business, Administration and Management

- 4201 Business Administration and Management
- 4202 Human Resource Development
- 4203 Institutional Management
- 4204 Labor/Industrial Relations
- 4205 Management Science
- 4206 Organizational Behavior
- 4207 Personnel Management
- 4299 Business Management - Other

Business - Other

- 4301 Business Economics
- 4302 International Business Management
- 4303 Management Information Systems
- 4304 Marketing and Distribution
- 4305 Marketing Management and Research
- 4399 Business Fields - Other