LOUISIANA BOARD OF REGENTS BOARD OF REGENTS SUPPORT FUND

REVIEW OF COMPETITIVE PROPOSALS SUBMITTED FOR FUNDING CONSIDERATION IN THE DEPARTMENTAL ENHANCEMENT PROGRAM

FY 2020-21 COMPETITION

March 18, 2021

REPORT OF THE FINAL PANEL
BOARD OF REGENTS SUPPORT FUND
DEPARTMENTAL ENHANCEMENT PROGRAM
FY 2020-21

BACKGROUND INFORMATION

One hundred fourteen (114) proposals requesting a total of $15,225,036 in first-year monies were submitted for funding consideration in fiscal year (FY) 2020-21 to the Departmental Enhancement Program of the Board of Regents Support Fund (BoRSF). Projects were eligible in nine disciplines, including Arts, Business, Chemistry, Computer & Information Sciences, Earth & Environmental Sciences, Education, Engineering A, Mathematics, and Targeted Workforce.

As described in the FY 2020-21 Departmental Enhancement Request for Proposals (RFP), eligible institutions could submit two types of proposals: Comprehensive Enhancement proposals, which could request up to $1,000,000 over five years; and Targeted Enhancement proposals, which could request up to $200,000 for one year. Individual academic units could submit only one (1) Comprehensive Enhancement proposal; there were no restrictions on the number of Targeted Enhancement proposals submitted. An institutional screening committee consisting of, at a minimum, an administrative representative from the academic unit, an institutional academic officer, and a representative from the campus's sponsored programs office, was required to approve the selection of a Comprehensive Enhancement proposal for each submitting academic unit, as well as approve and rank Targeted Enhancement submissions in order of priority to the submitting academic unit. Overall, twenty (20) Comprehensive Enhancement proposals and ninety-four (94) Targeted Enhancement proposals were submitted. The RFP noted that only one to three Comprehensive Enhancement proposals could be selected for funding due to limited monies available and high long-term commitment of dollars required.

THE REVIEW PROCESS

Proposals were subjected to a two-stage review process. The chairs of each of the nine (9) discipline-based panels submitted written reports, including a priority ranking of highly recommended proposals, to the final panel chair, Dr. Zerihun Asseffa, Chair of the Chemistry Department at North Carolina A&T University.

After careful consideration of all panel reports, three (3) Comprehensive Enhancement proposals for a total of $896,910 in first-year funds are recommended. In addition, thirty-two (32) Targeted Enhancement proposals are recommended for a total of $3,447,006 in first-year funds, based on monies projected to be available. Overall, thirty-five (35) Departmental Enhancement proposals are recommended for the FY 2020-21 cycle, with first-year support totaling $4,436,750. For the

three (3) Comprehensive Enhancement proposals highly recommended for funding, a total of $1,932,910 was recommended over five years.

Table I of this report contains the rank-order list of the Comprehensive Enhancement proposals highly recommended for funding. **Table II** contains the rank-order list of Targeted Enhancement proposals of highly recommended for funding. **Table III** lists the final panel chair, along with the members and contributing consultants of the nine (9) first-round review panels. These tables are followed by written comments related to each of the recommended proposals. **Appendix A** contains a list of all Departmental Enhancement proposals submitted, and **Appendix B** contains the rating form used by all consultants to evaluate proposals.

Table I

Comprehensive Enhancement*: Highly Recommended for Funding

Rank	Number	Institution	Discipline	First-Year Request	First-Year Recommendation	Total Request	Total Recommendation
1	007ENH-21	LSU A&M	Business	$299,293	$299,293	$461,108	$461,108
2	019ENH-21	ULL	Earth & Environmental	$299,836	$299,836	$474,891	$474,891
3	014ENH-21	Tulane	Engineering A	$297,781	$297,781	$996,981	$996,981
TOTAL				**$896,910**	**$896,910**	**$1,932,980**	**$1,932,980**

* Proposal #002ENH-21, a project requesting a single year of support, was submitted in Comprehensive, but reviewed and recommended for funding in Targeted. See Table II.

Table II

Targeted Enhancement: Highly Recommended for Funding

Rank	Proposal	Institution	Discipline	Request	Recommendation
1	065ENH-21	Nicholls State	Education	$30,000	$30,000
2	002ENH-21	Fletcher TCC	Targeted Workforce	$144,371	$144,371
3	075ENH-21	Northwestern State	Arts	$110,228	$110,228
4	106ENH-21	UL Monroe	Chemistry	$199,649	$199,649
5	023ENH-21	Baton Rouge CC	Targeted Workforce	$100,844	$100,844
6	090ENH-21	Tulane	Mathematics	$195,674	$102,840
7	036ENH-21	Louisiana College	Business	$79,972	$79,972
8	082ENH-21	SU A&M	Computer & Information	$199,864	$199,864
9	071ENH-21	Northwestern State	Engineering A	$28,075	$28,075
10	084ENH-21	SU New Orleans	Education	$51,227	$51,227
11	108ENH-21	UL Monroe	Chemistry	$109,620	$109,620
12	060ENH-21	McNeese State	Engineering A	$199,903	$199,903
13	034ENH-21	Louisiana College	Arts	$55,802	$55,802
14	101ENH-21	UL Lafayette	Chemistry	$72,557	$72,557
15	086ENH-21	SU New Orleans	Computer & Information	$137,156	$137,156
16	076ENH-21	SLU	Arts	$79,041	$79,041
17	063ENH-21	Nicholls State	Education	$69,056	$69,056
18	104ENH-21	UL Monroe	Business	$24,939	$24,939
19	080ENH-21	SLU	Chemistry	$100,000	$100,000
20	102ENH-21	UL Monroe	Earth & Environmental	$29,780	$29,780
21	049ENH-21	LSU Shreveport	Earth & Environmental	$61,400	$61,400
22	100ENH-21	UL Lafayette	Education	$60,000	$60,000
23	056ENH-21	Louisiana Tech	Engineering A	$91,950	$91,950
24	111ENH-21	UNO	Arts	$172,568	$172,568
25	064ENH-21	Nicholls State	Business	$137,805	$137,805
26	093ENH-21	Tulane	Arts	$185,065	$185,065
27	047ENH-21	LSU Alexandria	Chemistry	$171,101	$171,101
28	041ENH-21	LSU A&M	Computer & Information	$119,900	$119,900
29	037ENH-21	LSU A&M	Earth & Environmental	$110,126	$110,126
30	052ENH-21	Louisiana Tech	Education	$73,390	$73,390
31	059ENH-21	Loyola New Orleans	Chemistry	$198,962	$198,962
32	043ENH-21	LSU A&M	Engineering A	$139,815	$139,815
TOTAL				**$3,539,840**	**$3,447,006**

Table III

FY 2020-21 Departmental Enhancement Review Panelists

Name	Institution	Specialty
Final Panel Chair		
Zerihun Assefa	North Carolina A&T University	Chemistry
Arts		
Harry Parker, Chair	Texas Christian University	Theatre
John Fleming	Texas State University	Theatre
Philip Hopper	University of Northern Iowa	Film Production
Brigid Maher	American University	Film Production
Elizabeth Herrmann	University of South Florida	Graphic Arts
Steven McCarthy	University of Minnesota	Graphic Arts
Daniel Abrahams	University of Arkansas	Music
Bradley Meyer	Stephen F. Austin State University	Music
Business		
Nitish Singh, Chair	St. Louis University	International Business
Scott Schaefer	University of Utah	Business Economics
Chemistry		
Wei You, Chair	University of North Carolina at Chapel Hill	Organic/Polymer
Katherine Seley-Radtke	University of Maryland Baltimore County	Biochemistry
Edmund Ndip	Hampton University	Experimental Physical
Computer & Information Sciences		
Stephen Tate, Chair	University of North Carolina at Greensboro	Security/Cryptography
Jaudelice de Oliveira	Drexel University	Computer Engineering
Earth & Environmental		
David Eggleston, Chair	North Carolina State University	Coastal
Natasha Dimova	University of Alabama	Geochemistry/Marine
Education		
Kenneth Anderson, Chair	Howard University	Curriculum/Instruction
Anita Welch	Wayne State University	Curriculum/Instruction
Engineering A		
Shaikh Ahmed, Chair	Southern Illinois University	Electrical Engineering
Lisa Spainhour	Florida A&M University	Civil Engineering
Brandon Weeks	Texas Tech University	Chemical Engineering
Mathematics		
Hema Srinivasan, Chair	University of Missouri	Commutative Algebra
Robin Blankenship	Morehead State University	Graph Theory
Targeted Workforce		
Larry Warford, Chair	Consultant	Workforce Issues
Russ Hamm	Consultant	Two-Year Colleges

FY 2020-21 Departmental Enhancement
Comprehensive Enhancement: Proposals Highly Recommended for Funding

Ranking: #1 in Comprehensive Enhancement
Proposal #: 007ENH-21 Institution: Louisiana State University and A&M College
Discipline: Business
Title: SEEDER FOR GROWTH LA - Strategic Eye-tracking and Emotional Designs in Experimental Research For Optimally Reinforcing and Growing Research & Outreach Wins That Help LA
Total Requested: $461,108 (Year 1: $299,293; Year 2-5: $161,815)
Total Recommended: $461,108 (Year 1: $299,293; Year 2-5: $161,815)

This proposal seeks to enhance the Behavioral Research Lab in LSU A&M's College of Business with equipment to expand biometric measurement capabilities and improve data integration. It is a strong and innovative project with prospects to improve both research excellence and student experience. The rationale is clear and convincing. The goals are specific and well-tuned to university and departmental missions. The work plan is clearly delineated with tasks, responsibilities, and schedules for short-, medium-, and long-term goals. The technology upgrade will enhance research productivity and attract future talent. It will allow students to be trained in cutting-edge biometric technology. The project's potential impact on curriculum development, especially doctoral education, is outstanding. The practical research outcomes for faculty, including enhanced competitiveness for future funding, are also well described. The project sustainability plans and budget are well justified. The project team is extremely well qualified to ensure the success of the project. The project is constructed in a manner that will minimize future costs and maximize existing resources. Full funding is recommended.

Ranking: #2 in Comprehensive Enhancement
Proposal #: 019ENH-21 Institution: University of Louisiana at Lafayette
Discipline: Earth & Environmental
Title: Automated Particle Accelerator Control System for Science and Engineering Research and Education at the University of Louisiana at Lafayette
Total Requested: $474,891 (Year 1: $ 299,836; Year 2: $136,895; Year 3: $38,160)
Total Recommended: $474,891 (Year 1: $ 299,836; Year 2: $136,895; Year 3: $38,160)

This proposal seeks to acquire an automated control system (ACS) for an existing Tandem Pelletron accelerator at the University of Louisiana at Lafayette (ULL). The Pelletron system at UL Lafayette's Louisiana Accelerator Center (LAC) is unmatched in Louisiana and houses one of the three Oxford Microbeam (OM) nuclear microprobe facilities in the country. This project replaces the three-decades-old, obsolete manual control unit. This is crucial for effectively providing cutting-edge research capabilities in ion beam science for local and external

collaborators. The automation will expand efficiency of the ion beam application in serving a wide range of research communities, including atomic and nuclear physics, environmental sciences, chemistry, biology, space science and engineering, and semiconductor technology. The goals align with the primary and secondary missions of the LAC, and well as those of the University. The work plan and timeline are clearly defined. A clear set of metrics is presented for evaluation. The University is committed to long-term maintenance of the requested equipment. This impressive team has already amassed over $133 million in external funding. The budget is reasonable. This was one of the strongest proposals in the Earth and Environmental category and is a very worthy investment. Full funding is recommended.

Ranking: #3 in Comprehensive Enhancement
Proposal #: 014ENH-21 Institution: Tulane University
Discipline: Engineering A
Title: Enhancement of Research Infrastructure for Characterizing Chemically Engineered Functional Materials
Total Requested: $996,981 (Year 1: $297,781; Years 2-5: $699,200)
Total Recommended: $996,981 (Year 1: $297,781; Years 2-5: $699,200)

This proposal seeks to acquire equipment for advanced functional materials characterization and synthesis at Tulane University. The project's goals and objectives are clearly written, well-conceived, and highly focused. The current needs and challenges have been well identified and the PIs are meticulous in describing the research projects. The project's rationale is thoroughly presented, in substantial scientific detail. Tulane is a leader in the study and design of new materials. The equipment requested would go a long way in helping the program to create new knowledge that may lead to disruptive breakthroughs. The inclusion of an undergraduate research program is commendable. It will create opportunities for students to be trained in cutting-edge and industry-standard toolkits, become competitive, and contribute to the economic development of the State and the nation. The research faculty are exceptionally qualified, well-published, and well-funded. The work plan is detailed and sensible. The outcomes are transformative. Full funding is recommended.

FY 2020-21 Departmental Enhancement
Targeted Enhancement: Proposals Highly Recommended for Funding

Ranking: #1 in Targeted Enhancement
Proposal #: 065ENH-21 Institution: Nicholls State University
Discipline: Education
Title: Continuous Improvement Efforts for the Bayou Region's Future Teachers
Requested: $30,000 Recommended: $30,000

The proposal seeks to improve diversity in teacher education and faculty recruitment in the Department of Teacher Education at Nicholls State. This is a bold initiative that will enhance recruitment and retention through curricular improvements. The project will expand many of the unit's current research work and provide new resources and research opportunities in the areas of diversity and inclusion. It will impact workforce development by providing the necessary training for teachers to implement inclusive and equitable practices when working with diverse populations. The work plan is concise and compelling. It clearly identified which team members were responsible for which tasks. The project incorporates the Accreditation and Quality Assurance Team from the College of Education and Behavioral Sciences, which adds credibility to the work plan. The evaluation plan includes specific metrics and is established in a manner that will clearly assess the project's impact. Full funding is recommended.

Ranking: #2 in Targeted Enhancement
Proposal #: 002ENH-21 Institution: Fletcher Technical Community College
Discipline: Targeted Workforce
Title: Building Capacity & Workforce through Integrated Production Technologies
Requested: $144,371 Recommended: $144,371

This proposal, submitted in Comprehensive Departmental Enhancement but as a one-year project ranked in Targeted, seeks to expand training capacity in Fletcher's Integrated Production Technologies program in response to an industry request for more crane and plant operators. It is a well-written proposal that specifically addresses each of the required categories and will strongly impact students and the local economy. The goals and objectives are well developed and clear. The rationale is useful and supportive. Industry support is evident. The program addresses high-wage/high-demand careers. The work plan includes sufficient information about actions and a timetable. The impact statements are strong and descriptive. The project integrates existing equipment and expands its usefulness. Enhanced training will help decrease workplace injuries. The qualitative and quantitative analyses will produce a strong evaluation outcome. The section on sustainability lacked details. The staff is experienced and qualified. The budget is clear and well explained. Full funding is recommended.

Ranking: **#3 in Targeted Enhancement**
Proposal #: **075ENH-21** **Institution:** **Northwestern State University**
Discipline: **Arts**
Title: **Enhancement of Methods Course Offerings through the Acquisition of Musical Instruments**
Requested: **$110,228** **Recommended:** **$110,228**

This proposal seeks to acquire instruments to improve instruction and develop functional performance and teaching abilities appropriate to each student's teaching specialization. The project will incorporate modern band instruments into the music education curriculum and satisfy accreditation concerns. This is one of the most basic needs for a thriving instrumental music program, particularly one that has a strong secondary education focus. The State's future secondary-level music teachers must have access to an adequate number of instruments, in good repair, to facilitate their training. This is a strong proposal, with an appropriate budget, a well-justified number of standard student-level instruments requested, and careful consideration for durability, sustainability, and quality. Full funding is recommended.

Ranking: **#4 in Targeted Enhancement**
Proposal #: **106ENH-21** **Institution:** **University of Louisiana at Monroe**
Discipline: **Chemistry**
Title: **Acquisition of a Mass Spectrometry System to Maintain and Enhance Research and Education at University of Louisiana Monroe**
Requested: **$199,649** **Recommended:** **$199,649**

This proposal seeks to acquire a mass spectrometer (MS) for the Basic Pharmaceutical and Toxicological Sciences core lab at ULM. It is well written and thorough. The requested instrument will replace an aging MS instrument used for research and education in multiple units on campus, including the School of Pharmacy, Department of Toxicology, and Department of Chemistry. The goals are clearly stated and achievable, and closely related to the mission statements of the School and the lead department. The current MS is contaminated and cannot be repaired. The new instrument will have strong impacts on research, teaching, and student training. The University is providing matching funds of $200,000 to support half of the cost. This shows a strong institutional commitment. Further, the University will support maintenance and supplies. The faculty has the appropriate experience and expertise. The team has reviewed numerous options and settled on an excellent system that will maximize the benefits to both researchers and students. Full funding is recommended.

Ranking: **#5 in Targeted Enhancement**
Proposal #: **023ENH-21** **Institution:** **Baton Rouge Community College**
Discipline: **Targeted Workforce**
Title: **Drafting High Tech Lab**
Requested: **$100,844** **Recommended:** **$100,844**

This proposal seeks to upgrade a newly renovated drafting space into a modern, high-tech, industry-quality lab. The goals are well stated and measurable. The institutional metrics provided, including student GPA and retention rates, are particularly strong. Graduates of the program will be prepared to enter the workforce with the skills necessary to secure viable employment in their chosen fields or continue their education through a 2 + 2 articulation agreement. The project and proposal structure are consistent with the intent of the competition category and directly responsive to workforce needs. The work plan is very thorough, with a detailed list of actions, assigned responsibilities, and a clear timetable. The plan for partnership with Southeastern Louisiana University for the training of faculty is excellent. The evaluation plan is well developed and includes qualitative measures. The overall impact is strong, though important areas of the proposal, such as goals, objectives and budget justification, were not fully developed. A follow-up to internship performance should have been included. Full funding is recommended.

Ranking: **#6 in Targeted Enhancement**
Proposal #: **090ENH-21** **Institution:** **Tulane University**
Discipline: **Mathematics**
Title: **Targeted Enhancement for Core Areas of Mathematics at Tulane**
Requested: **$195,674** **Recommended:** **$102,840**

This proposal seeks to build a strong and productive research hub at Tulane by enhancing initiatives in core areas of mathematics. The team members are active in interrelated areas of algebraic geometry, commutative algebra, some invariant theory, combinatorics, knot theory and computational algebra. One goal is to establish the Department as an internationally recognized center in algebra, algebraic geometry, and topology. Each aspect of the project, including teaching advanced classes, organizing seminars, hosting short- and long-term visitors, and supporting travel to conferences, will elevate the unit's ability to perform significant research, compete for funding, improve curricula, and impact recruitment. The project is clearly connected to the mission statement of the academic unit. Evaluation metrics include publications, external funding, and number of PhD and Master's degrees awarded. The team members have ample experience in teaching, leading research, and organizing conferences; they can certainly implement the plan they propose. The goal of establishing an international reputation with a one-year project is ambitious, though the work proposed will lay the foundation with impact that is sustainable. The equipment and software requests were not fully justified. The travel is too

extensive for a one-year project and should be reduced. Partial funding of $102,840 is recommended, with software, publication fees and supplies requests not recommended. Other funding reductions may be made at the discretion of the PI.

Ranking: #7 in Targeted Enhancement
Proposal #: 036ENH-21 Institution: Louisiana College
Discipline: Business
Title: Enhancing the Business Curriculum through the Creation of a Collaborative Quantitative Lab/Classroom
Requested: $79,972 Recommended: $79,972

This proposal seeks to enhance Louisiana College's business curriculum by establishing a collaborative quantitative analysis lab/classroom. This is an important upgrade in a virtually connected world. It will improve student education through collaborative learning with a quantitative focus. The request is well articulated overall, with clearly defined objectives and detailed descriptions of the work plan, impact, sustainability, and evaluation. The proposal makes a strong case for this upgrade and the technology choices. The enhancement will improve retention and recruitment, as well as faculty research. The budget is efficient and appropriate. Full funding is recommended.

Ranking: #8 in Targeted Enhancement
Proposal #: 082ENH-21 Institution: Southern University and A&M College
Discipline: Computer & Information Sciences
Title: Stimulating Teaching, Learning, and Instructional Alignment in Computer Science Department at SUBR
Requested: $199,864 Recommended: $199,864

This proposal seeks to upgrade an existing laboratory in the Department of Computer Science at Southern University and A&M College with modern technology needed to enhance teaching, learning, and research capabilities. The timeline for work plan activities is detailed and clearly presented. The range of equipment upgrades is well justified. The case for impact on student services, curriculum and instruction, research capacity, faculty, and workforce development is compelling and clearly communicated. The PIs are experienced and fully capable of implementing the project. The enhancement to student facilities will be major and much needed. Full funding is recommended.

Ranking: **#9 in Targeted Enhancement**
Proposal #: **071ENH-21** **Institution:** **Northwestern State University**
Discipline: **Engineering A**
Title: **Enhancement of Automation, Robotics and Operation Research Infrastructure for Engineering Technology**
Requested: **$28,075** **Recommended:** **$28,075**

This proposal seeks to upgrade an automation, robotics and operation research laboratory at Northwestern State University. The requested equipment includes a rotary servo system and essential software toolboxes to enhance laboratory experiments in the areas of controls, mechatronics, and robotics. The rationale is strong and aligns extremely well with the departmental mission. Performance optimization of automatic and intelligent systems is an important topic in the area of robotics. The proposed curriculum incorporates novel elements while addressing issues related to failure and risk management associated with these emerging systems. Involving industry members in defining and revamping the curriculum is commendable. There is a plan to create a website highlighting the laboratory experiments, which would serve a broader community. Students trained in use of the proposed equipment and software will be more competitive in the job market and could contribute significantly to the State's economy. The project's work plan is well thought out, realistic, and detailed. The PIs are fully qualified and elucidated well how the proposed equipment will complement the existing infrastructure. The budget is small but reasonable and will allow the investigators to complete the work plan in an efficient and timely manner. In summary, the proposal is well written, well rounded, and clearly stands out, especially in terms of education. Full funding is recommended.

Ranking: **#10 in Targeted Enhancement**
Proposal #: **084ENH-21** **Institution:** **Southern University at New Orleans**
Discipline: **Education**
Title: **Teacher Education Technology Enhancement [TETEP]**
Requested: **$51,227** **Recommended:** **$51,227**

This project seeks to upgrade classroom equipment and hybrid-education technology for teacher-prep education. The proposal nicely integrates existing faculty research interests and professional accreditation standards to provide additional innovations to the new and 100% online MAT Special Education Mild/Moderate program. The proposed initiative has the potential to be far-reaching and should significantly impact the workforce in the greater New Orleans area. Moreover, the applicant provides clear linkages between the work plan activities and objectives of the project. The goal of enhancing the unit's technological infrastructure is aligned with the mission of the university; objectives are aligned with the goal and clearly measurable. Faculty will benefit from the technology, which will provide additional research

capacity. The evaluation plan is very detailed and includes specific measures that will assess the impact of the project. Full funding is recommended.

Ranking: #11 in Targeted Enhancement
Proposal #: 108ENH-21 **Institution: University of Louisiana at Monroe**
Discipline: Chemistry
Title: Acquisition of Benchtop NMR Spectrometer for the Enhancement of Chemistry Teaching and Research
Requested: $109,620 **Recommended: $109,620**

This proposal seeks to acquire a Benchtop NMR to incorporate into undergraduate and graduate courses in chemistry and biology programs at ULM. The Department of Chemistry currently has no NMR capability, though it is crucial to both research and education. The Department had a non-operational 300 MHz NMR instrument; however, rather than a new 300 MHz NMR, only a 100 MHz instrument is requested. Though the much more expensive 300 MHz NMR instrument would offer much better data quality than a 100 MHz instrument, the team evaluated the needs for both research and education, as well as maintenance/supplies requirements, and has selected this 100 MHz instrument. The impact will be enormous. The team has provided an excellent description of the courses that will be using the benchtop NMR, as well as the specific experiments to be undertaken. In addition, the proposal also provides an excellent description of how specific researchers will use the equipment in their projects. The institution will pay for the supplies. The maintenance of the instrument will be the responsibility of the PI, and repairs and supplies will be paid for out of lab fees and potentially through pay-for-use arrangements for those outside the department. Lastly, the 100 MHz benchtop NMR instrument is designed to last for a long period of time with minimum maintenance. Full funding is recommended.

Ranking: #12 in Targeted Enhancement
Proposal #: 060ENH-21 **Institution: McNeese State University**
Discipline: Engineering A
Title: Enhancement of Education in Cyber-physical Systems Security
Requested: $199,903 **Recommended: $199,903**

This project seeks to acquire relays, a real-time simulator, and other equipment that would allow the PIs to develop course content and hands-on laboratory courseware in the area of cyber-physical security and internet-of-things (IoT) at McNeese State University. This is an excellent proposal on an important topic: cyber-physical systems and their security. The real-time simulation of a power grid and the use of protective relays in addressing the security of such systems are strong components of the proposal. The need to upgrade the coursework and technology is well established. It is commendable that the PI will personally oversee some of these courses. The plan for integrating new equipment with existing items is well thought out.

The work plan is well articulated, though the timeline is tight. The University is serving a large number of undergraduate students in relevant areas and the project's potential for preparing the students and contributing to the economic development of the State is very high. This is a well-rounded proposal in an important and emerging technological area of interest. Full funding is recommended.

Ranking: #13 in Targeted Enhancement
Proposal #: 034ENH-21 **Institution: Louisiana College**
Discipline: Arts
Title: Performing Arts Curriculum Enhancement by the Replacement of Stage Platforms and Leg Supports in Multi-Purpose Performance Space
Requested: $55,802 **Recommended: $55,802**

The Department of Theatre at Louisiana College seeks to upgrade stage platforms for education and performance. The project goals are focused on safety, avoiding potential problems with health and even potential litigation. The photos of the broken, worn-out platforms are compelling. These new platforms will benefit arts programs and departments well beyond theatre and will used often by the College in its main auditorium. The platforms will be more accessible, much easier to transport, and precision manufactured to be level. The budget is well constructed and reasonable; the equipment requested makes sense. Full funding is recommended.

Ranking: #14 in Targeted Enhancement
Proposal #: 101ENH-21 **Institution: University of Louisiana at Lafayette**
Discipline: Chemistry
Title: Acquisition of a Gas Analysis System Integrated to Materials Characterization Suite for in situ Research in Chemistry
Requested: $72,557 **Recommended: $72,557**

This proposal requests a Gas Analysis System (GAS) to enhance research infrastructure in the Industrial Chemistry MS program and the new PhD program in Earth and Energy Sciences (EES). The Department is in the process of becoming more research-intensive. The team has made a strong case for the benefits of the GAS on research, in particular the capability of running in situ and in operando analyses. Importantly, these new capabilities will add value to the proposed research projects from different departments (including Chemistry). Measurable outcomes are provided and the work plan is clearly laid out. The impact of the GAS on research and education is significant. The PIs are fully capable of running this instrument. Internal funds have been earmarked for repair, maintenance, and equipment upgrades. The budget is clear and reflects project goals. Full funding is recommended.

Ranking: #15 in Targeted Enhancement
Proposal #: 086ENH-21 **Institution: Southern University at New Orleans**
Discipline: Computer & Information Sciences
Title: Boot Camp Entry-level IT Certification Infrastructure to Enhance AACSB Accreditation's "Engagement, Innovation, and Impact", Retention, and Five-Star Job Readiness
Requested: $137,156 **Recommended: $137,156**

The Department of Computer Information Systems at SUNO seeks to acquire entry-level IT certification equipment, instrumentation, faculty training, and curricula infrastructure to improve recruitment, retention and workforce readiness. The project goals and objectives are clearly stated. The project engages faculty, undergraduates and high school students in three innovative and sustainable boot camps that positively impact education and research. The proposed activities are expected to enable the Department to implement IT-related enhancements to effectively address the deficiencies observed in Learning and Teaching Standards of AACSB International Accreditation. The proposal is strong in terms of project organization and project management. The evaluation plan is suitable and complements the work plan. Details on sustainability are lacking. Full funding is recommended.

Ranking: #16 in Targeted Enhancement
Proposal #: 076ENH-21 **Institution: Southeastern Louisiana University**
Discipline: Arts
Title: New Contemporary Dance Studio Classroom and Performance Lab
Requested: $79,041 **Recommended: $79,041**

This proposal seeks to upgrade the space that will be utilized by SLU's Dance Studio as it moves from the Nursing Building to an annex of the Music/Performing Arts Building, which will have many benefits as it will allow synergy with multiple departments. The goals are clear, reasonable, and achievable. The work plan is well thought out and identifies all necessary steps. The project impacts 28 classes and over 5,000 students per year. The proposal sets forth solid plans to repurpose items that can be saved in the move (sound/light equipment), along with a very reasonable budget for new items to be acquired. In this situation, repurposing space is wise and economical. The PI is experienced and fully capable of implementing the project. Full funding is recommended.

Ranking: #17 in Targeted Enhancement
Proposal #: 063ENH-21 Institution: Nicholls State University
Discipline: Education
Title: Modeling the Molecular World for Student Success in Biology and Chemistry Through Applied Instruction
Requested: $69,056 Recommended: $69,056

This proposal outlines an innovative approach to improve foundational concepts in biology and chemistry at Nicholls State. Specifically, the initiative aims to create a multidisciplinary lending library that offers three-dimensional molecular models, rather than relying solely on two-dimensional imagery, to improve representational competence of pre-service secondary education teachers, in-service teachers, and the other students. The proposed project is closely aligned to the *Louisiana Science Standards* as well as the *Next Generation Science Standards*. The goals are succinctly outlined and clearly related to the mission of the unit, as well as have the potential to greatly enhance science education. The objectives, provided in narrative form, are measurable and directly related to the goals. There is a clear plan for future research and external grant applications based on the data generated from this project. The impact section is clearly written and has the potential to be far-reaching. Full funding is recommended.

Ranking: #18 in Targeted Enhancement
Proposal #: 104ENH-21 Institution: University of Louisiana at Monroe
Discipline: Business
Title: Women Take FLIGHT - Fostering Leadership to Increase Growth in Higher-ed Teams
Requested: $24,939 Recommended: $24,939

This proposal seeks to provide professional development opportunities for female faculty and staff at ULM through a multidisciplinary leadership program. The proposal is well written. The goals are well constructed and the associated objectives provide a clear picture of how the goals will be attained. The work plan and timeline are detailed and straightforward. The evaluation metrics are nicely articulated. The project has the potential to impact several departments and diverse constituencies. The idea of mentoring women faculty and staff and enhancing opportunities for professional development is timely and essential in the current socio-cultural context. This represents a good investment in developing leaders and providing professional mentoring and outreach. The project could also help attract more women to ULM and to the profession in general. Such efforts could signal to other universities the importance of mentoring and faculty development for women faculty and staff. Full funding is recommended.

Ranking: #19 in Targeted Enhancement
Proposal #: 080ENH-21 **Institution: Southeastern Louisiana University**
Discipline: Chemistry
Title: Enhancement of Chemical Research and Instruction via the Acquisition of Thermal Analysis Capabilities
Request: $100,000 **Recommended: $100,000**

The Departments of Chemistry and Physics at SLU seek to acquire a Differential Scanning Calorimeter/Thermogravimetric Analysis (DSC/TGA) system and a Combustion Elemental Analysis (EA) system. The objectives are clearly defined and directly related to project goals. The work plan is detailed and reasonable. These instruments will have numerous and significant impacts on education and research. They will provide undergraduate student access to modern thermal analysis and allow the development of data analysis assignments for use in general and non-major teaching labs. The departments will immediately regain thermal analysis capability and enhance teaching and research. The team has provided detailed justification for the specific models that are requested. A match of $57,000 is provided by SLU, showing a strong institutional commitment. Full funding is recommended.

Ranking: #20 in Targeted Enhancement
Proposal #: 102ENH-21 **Institution: University of Louisiana at Monroe**
Discipline: Earth & Environmental Sciences
Title: Developing an Improved Geosciences Curriculum Through a Data Science Perspective
Requested: $29,780 **Recommended: $29,780**

This proposal seeks to enhance the study of geosciences at ULM through equipment upgrades and curriculum development to incorporate the principles of data science. The goals are clearly stated and achievable. The timeline is realistic and detailed. The acquisition of computers and software will have a sizable impact on the current infrastructure. Class modules will be developed that incorporate the new equipment, replace long-outdated teaching methods, and increase interactive student learning. This resonates directly with the ULM mission of providing transformative STEM education. The PIs are very capable of implementing the project. Each requested item is justified in detail. The impact should be very strong relative to the modest budget. Full funding is recommended.

Ranking: **#21 in Targeted Enhancement**
Proposal #: **049ENH-21** **Institution:** **Louisiana State University Shreveport**
Discipline: **Earth & Environmental Sciences**
Title: **Providing GIS training to the LSUS community and Northwest Louisiana**
Requested: **$61,400** **Recommended:** **$61,400**

This proposal seeks to enhance the GIS infrastructure at LSU Shreveport for curriculum development, faculty training, and community outreach. The goals of the project are clearly aligned with the departmental mission. The project has developed a good revenue model for sustainability. This is a one-time investment that will vault the program to the next level of success. The funding request is modest and the return is significant. Full funding is recommended.

Ranking: **#22 in Targeted Enhancement**
Proposal #: **100ENH-21** **Institution:** **University of Louisiana at Lafayette**
Discipline: **Education**
Title: **Enhancing University-School Mentor Partnerships at UL Lafayette**
Requested: **$60,000** **Recommended:** **$60,000**

The proposal outlines an initiative to support and grow teacher professional identities and build a community of practice through enhanced mentorship training at UL Lafayette. This project is aligned with Louisiana's initiative to ensure that teachers who host interns or teacher residents are adequately trained to do so. The line items in the proposed budget are modest and well justified. The timeline is reasonable and identifies the individuals who are responsible for each event. All activities are aligned with the project goals and objectives. The increased partnerships and additional mentorship activities should provide excellent opportunities for research and will improve recruitment, retention, and workforce development. The mentorship project and related activities should be sustainable beyond the life of the grant through increased enrollment and the participation of community partners. The evaluation plan is sufficiently detailed and includes both summative and formative components. In addition, the potential impact on workforce development is significant. Full funding is recommended.

Ranking: #23 in Targeted Enhancement
Proposal #: 056ENH-21 Institution: Louisiana Tech University
Discipline: Engineering A
Title: Enhancing Nanomaterial Research and Education with an Atomic Layer Deposition System
Requested: $91,950 Recommended: $91,950

This proposal requests funds for the acquisition of an atomic layer deposition (ALD) system at Louisiana Tech University. The University is a leader in the area of nanotechnology education. Its excellent team of researchers has been very successful in securing external grants, and is well-published and well-recognized in the field. Given the current enrollment trend, the nanotechnology program is trying hard maintain this strong reputation and grow. To this end, the requested equipment will be an strong addition to the existing infrastructure. ALD is a very important toolkit that is widely used in the deposition of thin films with myriad applications. To be competitive, it is critical that students be trained in this equipment. The plans for faculty and student development are well conceived and well thought out. A "rich mix" of research projects has been proposed and it is clear that the equipment will be used extensively. Although research-focused, the PIs' plan to include the equipment in revamping multiple courses is commendable. Full funding is recommended.

Ranking: #24 in Targeted Enhancement
Proposal #: 111ENH-21 Institution: University of New Orleans
Discipline: Arts
Title: Equipment for High Dynamic Range and High Resolution Video Post-Production Workflows
Requested: $172,568 Recommended: $172,568

This proposal seeks to enhance film studies at UNO with advanced computers and projection equipment for a 300-seat screening hall. As the campus offering the only graduate film program in the State, UNO is a logical home for this proposal. The proposal is thoughtful, well supported, and clear. The projection system will foster closer relationships with the film and television industry. With this system, the Film Program can host guest filmmakers to screen their films and use this larger space for online interfaces with filmmakers in Hollywood, New York and around the world. The priority of the proposed project is to enable students to continue the mission of enriching the local New Orleans community while interacting with communities across the globe. One of the objectives of the proposal is to update two finishing suites with robust computers, HDR monitors, and expanded software capabilities, to adhere to industry standards in editing, color correction, and sound mixing. The long-term maintenance plan is not well developed and is a concern. Full funding is recommended.

Ranking: #25 in Targeted Enhancement
Proposal #: 064ENH-21 Institution: Nicholls State University
Discipline: Business
Title: Creating a High Impact Learning Environment for Teamwork and Collaboration
Requested: $137,805 Recommended: $137,805

The College of Business Administration at Nicholls State seeks to upgrade and enhance the student learning experience by redesigning an existing lab and classroom into collaborative learning environments. The project goal is to improve students' skills, including teamwork, critical thinking, interpersonal skills, and technology retention. This kind of collaborative learning and technology enhancement is critical as universities transition into the highly networked and digitized economy. The proposal nicely delineates the issues faced by the College and ways in which this grant proposal will help alleviate some of these challenges. The proposal highlights specific examples, which provide a good view of this project's operational impacts. It has the potential to improve facilities by enabling more remote teaching and team-based learning. The proposal shows a clear connection to the recruitment, retention, and competitiveness of graduates. The overall project outcomes for enhanced student learning make this proposal a priority investment. It is well written overall. The goals and the impact sections are especially well articulated. Full funding is recommended.

Ranking: #26 in Targeted Enhancement
Proposal #: 093ENH-21 Institution: Tulane University
Discipline: Arts
Title: Targeted Enhancement for Documentary Filmmaking and Digital Media Practice at Tulane University
Requested: $185,065 Recommended: $185,065

This proposal seeks to enhance the Digital Media Practices Program at Tulane with industry-standard equipment and tools. The interdisciplinary project supports Tulane's expansion into documentary filmmaking. The goals are clearly presented and the justification is persuasive. The rationale for proposing a documentary filmmaking program is clearly presented and the arguments are well honed. The audio documentary package is intended to provide support for digital film documentaries as well as standalone audio-only documentaries. The enhanced infrastructure requested in this proposal will provide a ready avenue for documenting Louisiana stories for Louisiana-based productions and tourism. Overall, the proposal's justification, budget, vision, and goals are well presented and strong. Full funding is recommended.

Ranking: #27 in Targeted Enhancement
Proposal #: 047ENH-21 **Institution: Louisiana State University of Alexandria**
Discipline: Chemistry
Title: Enhancing the chemistry curriculum at LSUA through the acquisition of gas-chromatograph mass spectrometer [GC-MS] and nuclear magnetic resonance spectrometer [NMR]
Requested: $171,101 **Recommended: $171,101**

This proposal seeks to acquire two instruments, a gas chromatograph-mass spectrometer and a nuclear magnetic resonance spectrometer, to improve undergraduate chemistry education and research at LSUA. This equipment will bolster the Department's chances of obtaining ACS accreditation as well as improve the competitiveness of graduates in the workforce. The project will result in upgrades to the undergraduate curriculum, which in turn will impact multiple departments since Organic Chemistry is a required course for many disciplines. Undergraduate research projects will also be impacted. The team has the necessary expertise to implement the project. Overall, the proposal is well written, with clearly defined goals, work plan and evaluation sections. Full funding is recommended.

Ranking: #28 in Targeted Enhancement
Proposal #: 041ENH-21 **Institution: Louisiana State University and A&M College**
Discipline: Computer & Information Sciences
Title: Accelerated Machine Learning, Big Data, and Graphics Education and Research Equipment
Requested: $119,900 **Recommended: $119,900**

Two units at LSU A&M, the Department of Computer Science and the Division of Electrical & Computer Engineering, seek to enhance computational accelerator-based instruction and research. The project goals are clearly stated. The objectives include upgrading the student workstation laboratory, providing a shared accelerator system, and securing faculty equipment needed to support instructional and research activities. The equipment will improve the PIs' competitiveness for funding, student recruitment and retention, and job opportunities for graduates. The team has extensive experience in the areas impacted by the equipment acquisition. Full funding is recommended.

Ranking: #29 in Targeted Enhancement
Proposal #: 037ENH-21 **Institution: Louisiana State University and A&M College**
Discipline: Earth & Environmental Sciences
Title: Investigating cloud and hurricane water isotopic processes for research and student education
Requested: $110,126 **Recommended: $110,126**

This proposal requests instrumentation to facilitate investigations of cloud and hurricane water isotopic processes for research and student education. The water isotope analyzer is relatively low in cost compared to traditional isotope ratio mass spectrometers used to measure water isotopic ratios. The project will build automatic rain samplers to be installed on the roof of the Geoscience building on the campus to generate real-time hourly isotopic measurements of precipitation as well as deploy auto samplers to collect water samples in storm events at locations in Louisiana. The budget is well thought out. The requested instrumentation is manufactured by a leader in the field (Picarro) and provides a low-cost but high-precision alternative for water isotope analyses compared to traditional IRMS. The instrument is also portable and can be used in both the lab and the field, making it a high-return investment. Full funding is recommended.

Ranking: #30 in Targeted Enhancement
Proposal #: 052ENH-21 **Institution: Louisiana Tech University**
Discipline: Education
Title: Nutrition Assessment and Education Laboratory Enhancement
Requested: $73,390 **Recommended: $73,390**

The Nutrition Assessment and Education Laboratory at Louisiana Tech seeks equipment to enhance graduate- and undergraduate-level research. The goals of the project are very clearly stated, reasonable, achievable, and related to the mission of the academic unit. Grant activities clearly support the missions of the undergraduate and graduate programs. The proposal includes reasonable and measurable objectives to support the goals and a timeline that identifies key faculty for the project components included in the timeline. Very specific examples are given of ways in which the facilities, curricula, and workforce competitiveness of graduates will be improved. The additional equipment will also elevate the research capability of faculty and aid in faculty progress towards tenure, making the unit more competitive for external funding in the future. Full funding is recommended.

Ranking: **#31 in Targeted Enhancement**
Proposal #: **059ENH-21** **Institution:** **Loyola University New Orleans**
Discipline: **Chemistry**
Title: **LCMS instrumentation for enhancing analytical capabilities and training**
Requested: **$198,962** **Recommended:** **$198,962**

Loyola's Department of Chemistry and Biochemistry seeks to acquire a new UHPLC-MS which will replace an outdated instrument. The students' expertise and skill with an analytical instrument will be enhanced as the instrument is widely used across many fields. The project team has provided a convincing plan to integrate this proposed instrument into the curricula of several courses, as well as research projects. The impacts on research and education, including training students for better employment opportunities, are significant. The proposed costs are well justified, and the Department has committed to supporting the maintenance needs and supplies. The evaluation plan is rather vague, and could be much improved with additional details. The PIs are well able to implement the project. Full funding is recommended.

Ranking: **#32 in Targeted Enhancement**
Proposal #: **043ENH-21** **Institution:** **Louisiana State University and A&M College**
Discipline: **Engineering A**
Title: **Anisotropic Plasma Etching for Science and Engineering Research and Education at Louisiana State University**
Requested: **$139,815** **Recommended:** **$139,815**

This proposal requests funds to upgrade and add new modules to an existing plasma etching facility at LSU A&M. LSU's Chemical Engineering program is strong, with large numbers of graduate and undergraduate students. The PIs are world-class researchers with excellent track records of accomplishment. They have laid out a good mix of projects that can benefit from the requested upgrade, though this proposal may be too focused in "future-proofing" the current system. Nevertheless, certain additions/upgrades to the existing facility will be very useful and, if properly configured, provide opportunities for fundamental technological innovations in several areas, such as low-dimensionality chiral aluminum plasmonic devices and nitride and oxide structures. Some projects, e.g., fabrication of quantum optical devices, are highly ambitious and need careful benchmarking against the state of the art. Most of the projects are deep in intellectual merit. That the equipment will be made available to researchers across the State and the country is commendable. Full funding is recommended.

APPENDIX A

Proposals Submitted to the Departmental Enhancement Program - Comprehensive
for the FY 2020-21 Review Cycle

Proposal Number	PI Name	Institution	Project Title	Primary Discipline	Duration	Amount Requested					
						Year 1	Year 2	Year 3	Year 4	Year 5	Total
001ENH-21	Dr. Cory Wikan	Centenary College	Hurley School of Music Artistry Enhancement Initiative	Arts	3 Year(s)	$297,590	$186,241	$198,758	$0	$0	$682,589
002ENH-21	Dr. Clint Coleman	Fletcher Technical Community College	Building Capacity & Workforce through Integrated Production Technologies	Targeted Workforce	1 Year(s)	$144,371	$0	$0	$0	$0	$144,371
003ENH-21	Dr. Daphne Williams	Grambling State University	A College of Business Pilot Program: The Tiger Academic Support Center [TASC]	Business	5 Year(s)	$216,303	$195,727	$195,727	$196,495	$195,727	$999,979
004ENH-21	Prof. James Dorman	Louisiana State University and A & M College	In-operando Surface Chemistry Characterization and Teaching Center	Engineering A (Chemical, Civil, Electrical)	5 Year(s)	$291,097	$182,716	$168,250	$180,000	$151,821	$973,884
005ENH-21	Dr. Lake Douglas	Louisiana State University and A & M College	Enhancement for LSU's College of Art + Design Doctor of Design in Cultural Preservation Program	Arts	5 Year(s)	$200,000	$200,000	$200,000	$200,000	$200,000	$1,000,000
006ENH-21	Mr. Isaac Pletcher	Louisiana State University and A & M College	Facilitating Film: Capacity and Infrastructure Development for Film and Television Entertainment Education at LSU	Arts	3 Year(s)	$281,941	$174,410	$151,992	$0	$0	$608,343
007ENH-21	Dr. Dan Rice	Louisiana State University and A & M College	SEEDER FOR GROWTH LA - Strategic Eye-tracking and Emotional Designs in Experimental Research For Optimally Reinforcing and Growing Research & Outreach Wins That Help LA	Business	5 Year(s)	$299,293	$86,440	$25,125	$25,125	$25,125	$461,108
008ENH-21	Dr. Kathleen Heiden	Louisiana Tech University	Plaid to Profession	Business	5 Year(s)	$259,667	$177,087	$177,087	$177,087	$177,087	$968,015

Proposals Submitted to the Departmental Enhancement Program - Comprehensive
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Proposal Number	PI Name	Institution	Project Title	Primary Discipline	Duration	Amount Requested					
						Year 1	Year 2	Year 3	Year 4	Year 5	Total
009ENH-21	Dr. Ahmed Abdel-Mohti	McNeese State University	Enhancement Plan to Add Structural Engineering Laboratory for Engineering and Science Education at McNeese State University	Engineering A (Chemical, Civil, Electrical)	3 Year(s)	$295,850	$199,322	$155,041	$0	$0	$650,213
010ENH-21	Dr. Duane Smith	Nicholls State University	Preparing Tomorrows Scientists Today: Enhancing the Undergraduate Biochemistry Experience for Science Majors	Chemistry	2 Year(s)	$252,299	$132,858	$0	$0	$0	$385,157
011ENH-21	Dr. Ephraim Massawe	Southeastern Louisiana University	Robotic Equipment and Infrastructure to Enhance Research to Evaluate PPEs' Performance Against Bioaerosols and Other Inhalation Hazards	Engineering A (Chemical, Civil, Electrical)	5 Year(s)	$284,419	$194,020	$194,960	$189,250	$130,334	$992,983
012ENH-21	Dr. Radian Belu	Southern University and A&M College - Baton Rouge	A Unified Laboratory for Education, Training and Research of Renewable Energy, and Smart Micro-Grids [RESmG]	Engineering A (Chemical, Civil, Electrical)	2 Year(s)	$194,463	$23,000	$0	$0	$0	$217,463
013ENH-21	Dr. Ilko Iliev	Southern University at Shreveport	Undergraduate Environmental Biology Program at SUSLA: Preparation for Career Advancement	Earth and Environmental Sciences	2 Year(s)	$53,620	$53,620	$0	$0	$0	$107,240
014ENH-21	Prof. Henry Ashbaugh	Tulane University	Enhancement of Research Infrastructure for Characterizing Chemically Engineered Functional Materials	Engineering A (Chemical, Civil, Electrical)	5 Year(s)	$297,781	$200,000	$200,000	$199,301	$99,899	$996,981
015ENH-21	Prof. Ricardo Cortez	Tulane University	Tulane University Mathematics Department: Statistical And Mathematical Modeling for Biological Applications, SAMMBA	Mathematics	5 Year(s)	$299,972	$174,940	$174,940	$174,940	$174,940	$999,732

Proposals Submitted to the Departmental Enhancement Program - Comprehensive
for the FY 2020-21 Review Cycle

Proposal Number	PI Name	Institution	Project Title	Primary Discipline	Duration	Amount Requested					
						Year 1	Year 2	Year 3	Year 4	Year 5	Total
016ENH-21	Dr. Russell Schmehl	Tulane University	Strengthening Research and Diversity in the Tulane Ph.D. Program in Chemistry	Chemistry	5 Year(s)	$300,000	$200,000	$200,000	$200,000	$100,000	$1,000,000
017ENH-21	Dr. Samendra Sherchan	Tulane University Health Sciences Center	Enhancement of core water quality laboratories for environmental health science research and education at Tulane University and University of New Orleans	Earth and Environmental Sciences	5 Year(s)	$296,481	$198,729	$196,721	$179,058	$104,375	$975,364
018ENH-21	Dr. Aimee Barber	University of Louisiana at Lafayette	Learning Lab at UL Lafayette: Equipping and Empowering Future Teacher Leaders	Education	5 Year(s)	$299,107	$199,536	$199,021	$149,832	$149,852	$997,348
019ENH-21	Dr. Naresh Deoli	University of Louisiana at Lafayette	Automated Particle Accelerator Control System for Science and Engineering Research and Education at the University of Louisiana at Lafayette	Earth and Environmental Sciences	3 Year(s)	$299,836	$136,895	$38,160	$0	$0	$474,891
020ENH-21	Dr. Matthew Green	University of Louisiana at Lafayette	Diversifying Educators and Education Pathways	Education	5 Year(s)	$72,000	$97,000	$167,000	$167,000	$167,000	$670,000

Total Number of Proposals submitted	20
Total Funds Requested for First Year	$4,936,090
Total Funds Requested for Second Year	$3,012,541
Total Funds Requested for Third Year	$2,642,782
Total Funds Requested for Fourth Year	$2,038,088
Total Funds Requested for Fifth Year	$1,676,160
Total Funds Requested	$14,305,661

Proposals Submitted to the Departmental Enhancement Program - Targeted
for the FY 2020-21 Review Cycle

Proposal Number	PI Name	Institution	Project Title	Primary Discipline	Amount Requested
021ENH-21	Dr. Mary Miller	Baton Rouge Community College	Understanding the Influence of Environmental Toxins on the Species Richness and Abundance of Freshwater Sponges	Earth and Environmental Sciences	$83,862
022ENH-21	Mr. Rhett Poche	Baton Rouge Community College	Building a Creative Computing Workforce by Enhancing BRCC's Interactive Digital Media and Graphic Arts Programs	Arts	$46,512
023ENH-21	Dr. Brandy Tyson-Polk	Baton Rouge Community College	Drafting High Tech Lab	Targeted Workforce	$100,844
024ENH-21	Prof. Shea Hembrey	Centenary College	Concept & Craft: Strategic Equipment Investment	Arts	$31,059
025ENH-21	Prof. Don Hooper	Centenary College	Centenary College of Louisiana Theatre Department 3D Design Lab	Arts	$66,083
026ENH-21	Dr. Scott Vetter	Centenary College	Enhancing the Geology Curriculum through acquisition of an Inductively Coupled Plasma Optical Emissions Spectrometer [ICP-OES]	Earth and Environmental Sciences	$73,967
027ENH-21	Dr. Ruby Broadway	Dillard University	Dillard University STEM Hybrid Learning Community	Earth and Environmental Sciences	$26,666
028ENH-21	Dr. Bobby Burkes	Grambling State University	Revamping Instrumental Applications in the Organic Chemistry Curriculum:	Chemistry	$185,800
029ENH-21	Prof. Rodrecas Davis	Grambling State University	Exhibition Gallery Enhancement for the Visual Arts	Arts	$28,612
030ENH-21	Dr. Dagne Hill	Grambling State University	Virtual Environmental Laboratory Assistance Program	Earth and Environmental Sciences	$20,000
031ENH-21	Dr. Danielle Williams	Grambling State University	"Move to Succeed: Increasing Diversity in the STEM Teaching Workforce"	Education	$199,853
032ENH-21	Dr. Joshua Davis	Louisiana College	Enhancing Instruction and Student Experience with Technology	Arts	$65,453
033ENH-21	Dr. Joshua Davis	Louisiana College	Enhancing the Physical Learning Environment With Improved HVAC Controls	Arts	$162,715
034ENH-21	Prof. Tabitha Huffman	Louisiana College	Performing Arts Curriculum Enhancement by the Replacement of Stage Platforms and Leg Supports in Multi-Purpose Performance Space	Arts	$55,802
035ENH-21	Prof. Tabitha Huffman	Louisiana College	Withdrawn by Instiution	Arts	$0
036ENH-21	Dr. Adena LeJeune	Louisiana College	Enhancing the Business Curriculum through the Creation of a Collaborative Quantitative Lab/Classroom	Business	$79,972
037ENH-21	Dr. Kristine DeLong	Louisiana State University and A & M College	Investigating cloud and hurricane water isotopic processes for research and student education	Earth and Environmental Sciences	$110,126
038ENH-21	Dr. Achim Herrmann	Louisiana State University and A & M College	Enhancement of Core Research Facilities for Environmental, Coastal, Earth and Planetary Sciences at LSU	Earth and Environmental Sciences	$190,611
039ENH-21	Dr. Ali Kazemian	Louisiana State University and A & M College	Acquisition of an ICAR Plus Concrete Rheometer	Engineering A (Chemical, Civil, Electrical)	$18,588
040ENH-21	Dr. Kory Konsoer	Louisiana State University and A & M College	Enhancement of riverine and coastal research and education through acquisition of a shallow water sonar system	Earth and Environmental Sciences	$195,016
041ENH-21	Dr. David Koppelman	Louisiana State University and A & M College	Accelerated Machine Learning, Big Data, and Graphics Education and Research Equipment	Computer and Information Sciences	$119,900

Proposals Submitted to the Departmental Enhancement Program - Targeted
for the FY 2020-21 Review Cycle

Proposal Number	PI Name	Institution	Project Title	Primary Discipline	Amount Requested
042ENH-21	Dr. Kanchan Maiti	Louisiana State University and A & M College	ACQUISITION OF AN IN-SITU SPECTROMETER TO QUANTIFY COASTAL WETLAND CARBON BUDGET	Earth and Environmental Sciences	$109,748
043ENH-21	Prof. Kevin McPeak	Louisiana State University and A & M College	Anisotropic Plasma Etching for Science and Engineering Research and Education at Louisiana State University	Engineering A (Chemical, Civil, Electrical)	$139,815
044ENH-21	Prof. Kermit Murray	Louisiana State University and A & M College	Acquisition of a Triple Quadrupole GC-MS instrument for the LSU Chemistry Mass Spectrometry Facility	Chemistry	$173,840
045ENH-21	Dr. Miriam Siebenbuerger	Louisiana State University and A & M College	In-Situ/Operando Scattering Measurements with Synchrotron Radiation	Chemistry	$157,355
046ENH-21	Prof. George Voyiadjis	Louisiana State University and A & M College	Enhancement of Large-scale Infrastructure Systems and Materials Testing Lab	Engineering A (Chemical, Civil, Electrical)	$150,000
047ENH-21	Dr. Gerard Dumancas	Louisiana State University at Alexandria	Enhancing the chemistry curriculum at LSUA through the acquisition of gas-chromatograph mass spectrometer [GC-MS] and nuclear magnetic resonance spectrometer [NMR]	Chemistry	$171,101
048ENH-21	Dr. Amy Erickson	Louisiana State University in Shreveport	Enhancement of Environmental Science Equipment at LSUS	Earth and Environmental Sciences	$58,750
049ENH-21	Dr. Amy Erickson	Louisiana State University in Shreveport	Providing GIS training to the LSUS community and Northwest Louisiana	Earth and Environmental Sciences	$61,400
050ENH-21	Mr. Jason Mackowiak	Louisiana State University in Shreveport	Enhancing the Digital Arts program through the implementation of Health Science visualization projects	Arts	$118,795
051ENH-21	Dr. Qingsong Zhao	Louisiana State University in Shreveport	Digital Forensics Unit for Cybersecurity Workforce Education and Training	Targeted Workforce	$9,226
052ENH-21	Dr. Simone Camel	Louisiana Tech University	Nutrition Assessment and Education Laboratory Enhancement	Education	$73,390
053ENH-21	Dr. Marilyn Cox	Louisiana Tech University	Targeted Enhancement: Acquisition of IR Spectrometers for Continuing and Enhancing Undergraduate Education and Research	Chemistry	$183,008
054ENH-21	Prof. Daniela Mainardi	Louisiana Tech University	Computer Laboratory for Science and Engineering Research	Engineering A (Chemical, Civil, Electrical)	$72,768
055ENH-21	Dr. Scott Poh	Louisiana Tech University	Incorporation of Zetasizer Analyzer into LA Tech Integrated Biochemical Research Laboratory	Chemistry	$38,620
056ENH-21	Prof. Shengnian Wang	Louisiana Tech University	Enhancing Nanomaterial Research and Education with an Atomic Layer Deposition System	Engineering A (Chemical, Civil, Electrical)	$91,950
057ENH-21	Mr. Salvatore Mannino	Loyola University New Orleans	Technical Theater Enhancement	Arts	$182,532
058ENH-21	Mr. Robert Racine	Loyola University New Orleans	Enhancement of Digital Filmmaking Program with High Resolution Cinema, VFX Processing, and Shared Storage	Arts	$174,381
059ENH-21	Dr. Clifton Stephenson	Loyola University New Orleans	LCMS instrumentation for enhancing analytical capabilities and training	Chemistry	$198,962

Proposals Submitted to the Departmental Enhancement Program - Targeted
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Proposal Number	PI Name	Institution	Project Title	Primary Discipline	Amount Requested
060ENH-21	Dr. Hamzeh Davarikia	McNeese State University	Enhancement of Education in Cyber-physical Systems Security	Engineering A (Chemical, Civil, Electrical)	$199,903
061ENH-21	Dr. Amber Hale	McNeese State University	Enhancement of Research and Teaching in the McNeese State University College of Science, Engineering, and Mathematics through the Acquisition of a Scanning Electron Microscope	Chemistry	$149,324
062ENH-21	Dr. Sara Dempster	Nicholls State University	High-Quality Clinical Experiences for Teacher Education Candidates	Education	$65,840
063ENH-21	Dr. Aimee Hollander	Nicholls State University	Modeling the Molecular World for Student Success in Biology and Chemistry Through Applied Instruction	Education	$69,056
064ENH-21	Dr. En Mao	Nicholls State University	Creating a High Impact Learning Environment for Teamwork and Collaboration	Business	$137,805
065ENH-21	Dr. Leah Peterson	Nicholls State University	Continuous Improvement Efforts for the Bayou Region's Future Teachers	Education	$30,000
066ENH-21	Dr. Uttam Pokharel	Nicholls State University	A Gas Chromatograph for the Teaching Organic Laboratory	Chemistry	$29,460
067ENH-21	Dr. Andrew Simoncelli	Nicholls State University	Vanishing Louisiana: Preserving the Lands, Histories and Cultures of the Bayou Region	Earth and Environmental Sciences	$143,500
068ENH-21	Dr. Esra Tekdal Yilmaz	Nicholls State University	Enhancing Technology in Department of Applied Sciences Computer Laboratory And Classes	Engineering A (Chemical, Civil, Electrical)	$115,331
069ENH-21	Dr. Cynthia Vavasseur	Nicholls State University	N-ABAL: Nicholls Applied Behavior Analysis Learning Lab	Education	$87,139
070ENH-21	Dr. Darcey Wayment	Nicholls State University	Using a liquid chromatograph mass spectrometer [LCMS] to enhance learning in the chemical, biological and agricultural sciences	Chemistry	$114,000
071ENH-21	Dr. Xinjia Chen	Northwestern State University	Enhancement of Automation, Robotics and Operation Research Infrastructure for Engineering Technology	Engineering A (Chemical, Civil, Electrical)	$28,075
072ENH-21	Dr. Rafiqul Islam	Northwestern State University	Development of Control Systems Labs Emphasizing on Electric Motor Control Lab	Engineering A (Chemical, Civil, Electrical)	$99,916
073ENH-21	Dr. Katrina Jordan	Northwestern State University	21st Century Classrooms for 21st Century Learners	Education	$76,094
074ENH-21	Dr. Daniel Rivera-Vazquez	Northwestern State University	Enhancement of materials characterization capabilities for chemistry and physics education and research through x-ray crystallography	Chemistry	$102,177
075ENH-21	Dr. J. Thompson	Northwestern State University	Enhancement of Methods Course Offerings through the Acquisition of Musical Instruments	Arts	$110,228
076ENH-21	Mr. Keith Costa	Southeastern Louisiana University	New Contemporary Dance Studio Classroom and Performance Lab	Arts	$79,041
077ENH-21	Dr. Colleen Klein-Ezell	Southeastern Louisiana University	Micro-credentialing of Differentiation skills for Every Learners' Success [MoDELS]	Education	$52,359
078ENH-21	Dr. Mohammad Saadeh	Southeastern Louisiana University	Enhancing Instruction and Training Quality to Establish Mechatronics Career Pathway Opportunities	Targeted Workforce	$155,700

Proposals Submitted to the Departmental Enhancement Program - Targeted
for the FY 2020-21 Review Cycle

Proposal Number	PI Name	Institution	Project Title	Primary Discipline	Amount Requested
079ENH-21	Mr. Steven Schepker	Southeastern Louisiana University	The Digital Initiative for Theatre Design	Arts	$76,736
080ENH-21	Dr. Benjamin Wicker	Southeastern Louisiana University	Enhancement of Chemical Research and Instruction via the Acquisition of Thermal Analysis Capabilities	Chemistry	$100,000
081ENH-21	Dr. Susan Zimlich	Southeastern Louisiana University	Enhancing STEM Teacher Preparation for Middle and Secondary Teachers: Establishing a Theory to Practice Experience with a STEM Education Lab	Education	$128,102
082ENH-21	Dr. Mathieu Kourouma	Southern University and A&M College - Baton Rouge	Stimulating Teaching, Learning, and Instructional Alignment in Computer Science Department at SUBR	Computer and Information Sciences	$199,864
083ENH-21	Dr. Paris Favorite	Southern University at New Orleans	PCR Equipment Infrastructure to Enhance Forensic Science Student Success, Retention, Post-graduate Achievement, and Career Preparation	Chemistry	$110,750
084ENH-21	Dr. Willie Jones, III	Southern University at New Orleans	Teacher Education Technology Enhancement [TETEP]	Education	$51,227
085ENH-21	Dr. obyung kwun	Southern University at New Orleans	Student, Curriculum and Institutional Enhancements Using Music Technology Equipment Infrastructure	Computer and Information Sciences	$65,676
086ENH-21	Dr. Igwe Udeh	Southern University at New Orleans	Boot Camp Entry-level IT Certification Infrastructure to Enhance AACSB Accreditation's "Engagement, Innovation, and Impact", Retention, and Five-Star Job Readiness	Computer and Information Sciences	$137,156
087ENH-21	Dr. Yanjun Yu	Southern University at New Orleans	Development and Implementation of An Integrated Computing System Infrastructure for Educational and Business Programs	Computer and Information Sciences	$68,499
088ENH-21	Dr. Kenie Moses	Southern University at Shreveport	Diversifying Medical Career Pathways for Students Through Engineering Technology	Targeted Workforce	$121,632
089ENH-21	Dr. Regina Webb	Southern University at Shreveport	Covid-19 New Age Learning: Increasing Student Success in Business Studies Programs through Virtual Student Accessibility	Business	$171,100
090ENH-21	Prof. Mahir Bilen Can	Tulane University	Targeted Enhancement for Core Areas of Mathematics at Tulane	Mathematics	$195,674
091ENH-21	Prof. Joel Mague	Tulane University	Purchase of an Enhanced Detector for the D8 Venture X-Ray Diffractometer to Replace its Failed Detector	Chemistry	$75,430
092ENH-21	Prof. Noshir Pesika	Tulane University	Acquisition of a Universal Materials Tester to Enhance Materials Research at Tulane	Engineering A (Chemical, Civil, Electrical)	$163,000
093ENH-21	Dr. Rick Snow	Tulane University	Targeted Enhancement for Documentary Filmmaking and Digital Media Practice at Tulane University	Arts	$185,065
094ENH-21	Dr. Cheehung Chu	University of Louisiana at Lafayette	Machine Learning Facilities for Enhancement of Computing and Informatics Research and Education	Computer and Information Sciences	$199,989
095ENH-21	Dr. Nathan Dolenc	University of Louisiana at Lafayette	UL Lafayette Instructional Materials Center: Creating Community and Collaborative Learning Spaces To Improve Teacher Preparation Experiences	Education	$188,989
096ENH-21	Dr. Farzad Ferdowsi	University of Louisiana at Lafayette	Enhanced Laboratory for Research/Educational Endeavors in Smart Grids	Engineering A (Chemical, Civil, Electrical)	$61,078

Proposals Submitted to the Departmental Enhancement Program - Targeted
for the FY 2020-21 Review Cycle

Proposal Number	PI Name	Institution	Project Title	Primary Discipline	Amount Requested
097ENH-21	Dr. Raphael Gottardi	University of Louisiana at Lafayette	Acquisition of a Fourier Transform Infrared microscope at the University of Louisiana at Lafayette	Earth and Environmental Sciences	$198,978
098ENH-21	Dr. Natalie Keefer	University of Louisiana at Lafayette	Designing and Implementing an Innovative Integrated Online Instructor Add-on Certification Program	Education	$64,313
099ENH-21	Dr. Zhongqi Pan	University of Louisiana at Lafayette	Development of Advanced Communication Technology Laboratory at UL Lafayette	Engineering A (Chemical, Civil, Electrical)	$167,820
100ENH-21	Dr. Leigh Tolley	University of Louisiana at Lafayette	Enhancing University-School Mentor Partnerships at UL Lafayette	Education	$60,000
101ENH-21	Dr. Hui Yan	University of Louisiana at Lafayette	Acquisition of a Gas Analysis System Integrated to Materials Characterization Suite for in situ Research in Chemistry	Chemistry	$72,557
102ENH-21	Dr. Tyler Fricker	University of Louisiana at Monroe	Developing an Improved Geosciences Curriculum Through a Data Science Perspective	Earth and Environmental Sciences	$29,780
103ENH-21	Mr. John Herrock	University of Louisiana at Monroe	Industrial Hygiene Teaching Laboratory Equipment Enhancement	Earth and Environmental Sciences	$57,886
104ENH-21	Dr. Leigh Hersey	University of Louisiana at Monroe	Women Take FLIGHT - Fostering Leadership to Increase Growth in Higher-ed Teams	Business	$24,939
105ENH-21	Mrs. Vanessa Kanamoto	University of Louisiana at Monroe	Multi-faceted Facility and Technology Update for the Performing Arts at University of Louisiana at Monroe	Arts	$196,352
106ENH-21	Dr. Georgios Matthaiolampakis	University of Louisiana at Monroe	Acquisition of a Mass Spectrometry System to Maintain and Enhance Research and Education at University of Louisiana Monroe	Chemistry	$199,649
107ENH-21	Dr. Todd Murphy	University of Louisiana at Monroe	Integrating research and education through a regional meteorological micronet	Earth and Environmental Sciences	$95,280
108ENH-21	Dr. Siva Murru	University of Louisiana at Monroe	Acquisition of Benchtop NMR Spectrometer for the Enhancement of Chemistry Teaching and Research	Chemistry	$109,620
109ENH-21	Dr. Malay Ghose Hajra	University of New Orleans	Augmented/ Virtual Reality Equipment for Engineering and Construction Management Education and Workforce Development	Engineering A (Chemical, Civil, Electrical)	$177,770
110ENH-21	Mr. jeffrey rinehart	University of New Orleans	Enhancing Distance Learning in Arts Education by creating Digital Art Kits	Arts	$61,030
111ENH-21	Prof. James Roe	University of New Orleans	Equipment for High Dynamic Range and High Resolution Video Post-Production Workflows	Arts	$172,568
112ENH-21	Prof. Mark Trudell	University of New Orleans	Instrumentation Enhancement for UNO Organic Chemistry Curriculum	Chemistry	$191,925
113ENH-21	Dr. Donald Zimmerman	University of New Orleans	BUILDING STUDENT COMPETENCIES IN DIGITAL HEALTHCARE MANAGEMENT	Business	$48,773
114ENH-21	Prof. Phoebe Zito	University of New Orleans	Acquisition of a GC-QQQ MS to Stimulate Environmental Science Research Competitiveness in Louisiana	Earth and Environmental Sciences	$187,709

Total Proposals Submitted	94
Total Funds Requested	$10,288,946

APPENDIX B

Departmental Enhancement Rating Form

Goals/Objectives 10 Points _____

-To what degree are the goals clearly stated, reasonable, achievable, and related to the mission statement of the academic unit? To what degree are the objectives measurable and related to the goals?

Comments:

-Strengths
-Weaknesses

Work Plan 20 Points _____

-To what degree does the proposal establish a compelling timeline for grant activities with a clear delineation of which team member is responsible for each task? To what degree does the work plan clearly establish the necessary tasks for achieving the project goals and objectives?

Comments:

-Strengths
-Weaknesses

Impact 30 points _____

-To what degree does the project elevate the unit's ability to perform significant research, compete for research funding, improve facilities or curriculum in a way that impacts recruitment, retention, and the workforce competitiveness of graduates? To what degree is this impact related to the mission statement of the academic unit?

Comments:

-Strengths
-Weaknesses

Evaluation 10 Points _____

-To what degree is a plan established for evaluating the impact of the project with criteria based on specific metrics?

Comments:

-Strengths
-Weaknesses

Sustainability **10 Points** _____

-To what degree are the goals, impact and individual budget requests sustainable beyond the life of the grant? To what degree are maintenance or sustainability plans established for equipment, software, supplies, as well as funds dedicated to staff, faculty and graduate students?

Comments:

-Strengths
-Weaknesses

Investigators **10 Points** _____

-To what degree do the team members appear capable of implementing the work plan?

Comments:

-Strengths
-Weaknesses

Budget **10 Points** _____

-To what degree is the budget efficiently crafted to maximize the project's impact? To what degree does the budget justification clearly explain the relationship of each individual request to the proposal's impact, goals and work plan?

Comments:

-Strengths
-Weaknesses