LaSPACE

Senior Design Project Support (Senior Design) Program

Offered by the Louisiana Space Grant Consortium



Under the authority of the NASA Space Grant College and Fellowship Program

Louisiana Space Grant Consortium (LaSPACE) 364 Nicholson Hall, Department of Physics and Astronomy Louisiana State University, Baton Rouge, LA 70803 225.578.8697 | <u>http://laspace.lsu.edu/</u> | <u>laspace@lsu.edu</u>

Senior Design Program Summary Page

About the Senior Design Program

The Senior Design Project Support Program is meant to offer supplemental funding in support of high-level student-led research and design projects conducted under the auspices of a formal Senior Design or Capstone Course. Projects must show clear relevance to NASA's mission and ongoing research at one or more of the NASA centers and be clearly aligned with research under the umbrella of one or more of the four mission directorates. This funding source is meant to supplement the cost of materials and supplies and/or travel for competitions related to such formally established senior design projects/courses.

Program Summary

- Proposals must be signed off on by the Faculty PI and the Designated Institutional Representative for Sponsored Programs at your institution.
- Award funds can be requested up to \$4,000; no strict cost-match is required, but some institutional investment will impact our evaluation.
- Please include the Student Participant List if your student participants have already been identified. If the team members are not all selected at the time of proposing, please be sure to send a complete Student Participant List as soon as the students have all been identified. All identified students must submit an online LaSPACE Student Participation Form.
- The final invoices and a final technical report must be submitted to the LaSPACE office within 30 days of the project end date. Photographs and copies of all papers, presentations, and posters generated should be shared with LaSPACE as they occur and collected/referenced in the final report. The final report guidelines are available from the LaSPACE office.

Proposal Submissions

- Submit all properly executed proposals via email as fully searchable pdf documents to <u>laspace@lsu.edu</u> by 11:59 pm on Friday, June 18, 2021.
- Important Dates:
 - Proposal Release Date: Friday, April 9, 2021
 - Proposal Due Date: Friday, June 18, 2021
 - o Anticipated Award Announcements: late June / early July 2021
 - Award Period of Performance: 08/15/2021 08/14/2022

LaSPACE General Guidelines

Introduction to the Space Grant Program

The Louisiana Space Grant Consortium (LaSPACE) is a Designated Consortium in the NASA National Space Grant and Fellowship Program network, which was designed to network colleges, universities, and state education boards with partners in business, industry, and the non-profit sector in order to promote, develop, and strengthen aerospace science, research, technology, education, and awareness. Our mission is "To enhance Space and Aerospace related research, education, and public awareness throughout the State of Louisiana and thereby promote math/science education, training of professionals, and economic development." LaSPACE promotes scientific research, workforce development, and public outreach to develop and strengthen long-term research capabilities within Louisiana that will make significant contributions to the research and technology Mission Directorates of NASA while supporting the goals of the state.

Basis of Authority

The Louisiana Space Grant Consortium (LaSPACE) currently comprises Louisiana public and private colleges and universities in addition to business/industry partners and other organizations. The consortium is funded jointly by the National Aeronautics and Space Administration (NASA) and by the Louisiana Board of Regents Support Fund (BORSF). The consortium is administered by the LaSPACE Council, under the aegis of NASA and the Board of Regents. The basis of authority for this and other programs of LaSPACE rests in part on the above funding. It is important, therefore, to note that the implementation of LaSPACE-supported projects must conform to applicable Federal and State regulations, in general, and to the NASA stipulations, in particular.

NASA Agency Information

NASA 2018 Strategic Plan

NASA's 2018 strategic plan aligns the Agency's future activities along three strategic themes of Discover, Explore, and Develop, as well as a fourth theme focused on the activities that will enable the Agency's mission.

- DISCOVER references NASA's enduring purpose of scientific discovery.
- EXPLORE references NASA's push to expand the boundaries of human presence in space.
- DEVELOP references NASA's broad mandate to promote the technologies of tomorrow.
- ENABLE references the capabilities, workforce, and facilities that allow NASA to achieve its Mission.

The complete plan can be downloaded here.

NASA Vision

To discover and expand knowledge for the benefit of humanity.

NASA Mission

Lead an innovative and sustainable program of exploration with commercial and international partners to enable human expansion across the solar system and bring new knowledge and opportunities back to Earth. Support the growth of the Nation's economy in space and aeronautics, increase understanding of the universe and our place in it, work with industry to improve America's aerospace technologies, and advance American leadership.

NASA Office of STEM Engagement (formerly Office of Education)

NASA's journeys have propelled technological breakthroughs, pushed the frontiers of scientific research, and expanded our understanding of the universe. These accomplishments, and those to come, share a common genesis: education in science, technology, engineering, and math. NASA's <u>Office of STEM Engagement</u> (OSTEM) delivers tools for young Americans and educators to learn and succeed. OSTEM seeks to:

- Create unique opportunities for students and the public to contribute to NASA's work in exploration and discovery.
- Build a diverse future STEM workforce by engaging students in authentic learning experiences with NASA people, content, and facilities.
- Strengthen public understanding by enabling powerful connections to NASA's mission and work.

To achieve these goals, NASA's Office of STEM Engagement strives to increase K-12 involvement in NASA projects, enhance higher education, support underrepresented communities, strengthen online education, and boost NASA's contribution to informal education. The intended outcome is a generation prepared to code, calculate, design, and discover its way to a new era of American innovation.

The National Space Grant College and Fellowship Program, from which LaSPACE is derived, is a component of the NASA Office of STEM Engagement's larger portfolio, managed at NASA Headquarters in Washington D.C., in alignment with the NASA Mission Directorates, and engagement with all NASA centers and facilities.

NASA Office of STEM Engagement, and by extension LaSPACE, supports the four strategic goals detailed in the 2018 plan. Research and design work supported by Space Grant or NASA EPSCoR must align with one or more of these strategic goals and corresponding objectives.

NASA Mission Directorates (MD)

Research and technology priorities are aligned with one or more of NASA's Mission Directorates:

The <u>Science Mission Directorate (SMD)</u> expands the frontiers of Earth science, heliophysics, planetary science, and astrophysics. Using robotic observatories, explorer craft, ground-based instruments, and a peer-reviewed portfolio of sponsored research, SMD seeks knowledge about our solar system, the farthest reaches of space and time, and our changing Earth.

The <u>Aeronautics Research Mission Directorate (ARMD)</u> transforms aviation with research to dramatically reduce the environmental impact of flight, and improves aircraft and operations efficiency while maintaining safety in increasingly crowded skies. ARMD also generates innovative aviation concepts, tools, and technologies for development and maturation by the aviation community.

The <u>Space Technology Mission Directorate (STMD)</u> pursues transformational technologies that have high potential for offsetting future mission risk, reducing cost, and advancing existing capabilities. STMD uses merit-based competition to conduct research and technology development, demonstration, and infusion of these technologies into NASA's missions and American industry. This mission directorate is being refocused as a new Exploration Research & Technology (ER&T) organization to support exploration as a primary customer.

The <u>Human Exploration and Operations Mission Directorate (HEOMD)</u> leads human exploration in and beyond low Earth orbit by developing new transportation systems and performing scientific research to enable sustained and affordable human life outside of Earth. HEOMD also manages space communication and navigation services for the Agency and its international partners.

All NASA subprograms must relate to and support one or more of these directorates. Likewise, all programs supported by LaSPACE must support the NASA organization, align with the NASA Strategic Plan, and support the goals of the Office of STEM Engagement.

NASA MD Contacts for University Researchers

Science Mission Directorate (SMD)

POC: Kristen Erickson, Director, Science Engagement Partnerships Phone: (202) 358-1017, Kristen.Erickson@nasa.gov

The Aeronautics Research Mission Directorate (ARMD)

POC: Karen L. Rugg, Lead, Communications and Education Phone: (202) 358-2197, karen.l.rugg@nasa.gov

Space Technology Mission Directorate (STMD)

POC: Damian Taylor, SBIR and STTR Mission, Directorate Liaison Phone: (202) 358-1432, damian.taylor@nasa.gov

Human Exploration and Operations Mission Directorate (HEOMD)

POC: Marc Timm Phone: (202) 358-0373, marc.g.timm@nasa.gov

NASA Center Liaisons

Ames Research Center, Krisstina Wilmoth	Kennedy Space Center, Jeffrey A. Kohler
Education Specialist	Technology Transfer Office
Phone: (650) 604-6137	Phone: (321) 867-2462
Krisstina.Wilmoth@nasa.gov	Jeffrey.A.Kohler@nasa.gov
Armstrong Flight Research Center, Krisstina Wilmoth	Langley Research Center, Kim Brush
Education Specialist	LaRC OSTEM Integration Manager
Phone: (650) 604-6137	Phone: (757) 864-6454
Krisstina.Wilmoth@nasa.gov	Kimberly.M.BBrush@nasa.gov
Goddard Space Flight Center, James L. Harrington	Glenn Research Center, Mark David Kankam, Ph.D.
Computer Research and Development	University Affairs Officer
Phone: (301) 286-4063	Phone: (216) 433-6143
James.L.Harrington@nasa.gov	Mark.D.Kankam@nasa.gov
Jet Propulsion Laboratory, Linda Rodgers or Petra Kneissl	Marshall Space Flight Center, Frank Six
University Programs Administrators	University Affairs Officer
Linda Phone: (818) 354-3274	Office of Academic Affairs (HS30)
Linda.L.Rodgers@jpl.nasa.gov	Phone: (256) 961-0678
Petra Phone: (818) 201-8805	Norman.F.Six@nasa.gov
Petra.A.Kneissl-milanian@jpl.nasa.gov	
Johnson Space Center, Kamlesh Lulla	Stennis Space Center, Mitch Krell, Ph.D.
Director, University Research Collaborations and	Data Analysis
Partnership Office	Phone: (228) 688-1821
Phone: (281) 483-3065	Mitch.Krell@nasa.gov
Kamlesh.P.Lulla@nasa.gov	

LaSPACE Program

The Louisiana Space Grant Consortium, part of the National Space Grant College and Fellowship Program and in partnership with the Louisiana Board of Regents, supports programs at affiliated academic institutions and other Louisiana organizations that address the NASA mission, federal CoSTEM goals, and state education and economic priorities. LaSPACE programs for Research, Higher Education, Workforce Development, K-12 Teacher Development, and Public Outreach, strengthen the Science, Technology, Engineering, and Math (STEM) education needed for a diverse technical workforce, and develops the research and economic infrastructure to boost Louisiana's contribution to the aerospace frontier.

Goals and Objectives

LaSPACE Goals and Objectives are directly aligned with NASA Office of STEM Engagement and National Program Emphases on Diversity, Workforce Development, Community Colleges, Pre-College teacher engagement, Competitiveness, NASA Research Relevance, Industry Relations, and State Government Involvement. The updated LaSPACE 2019 Strategic Plan describes a comprehensive program of Research, Education, and Service via 5 strategic goals, each in line with one or more NASA OSTEM objectives , to (1) Foster aerospace research and education (OSTEM 1.1, 1.2, 2.1, 2.2, 2.4, 3.2), (2) Foster and support hands-on experiential programs for higher education students (2.1, 2.2, 2.3, 2.4), (3) Contribute to pre-college STEM education excellence (1.2, 3.1), (4) Engage and educate the general public (3.1), and (5) Maintain an effective consortium of institutions involved in LaSPACE.

Major objectives for the achievement of these goals includes (1) Support for student and faculty research at consortium institutions, (2) Strengthening interactions between Louisiana aerospace industries, faculty, and students, (3) Increased participation in Space Grant programming with the state's HBCUs and Community & Technical Colleges, (4) Provide support to undergraduate and graduate students for research, design, and internship opportunities, (5) Engage students in experiential learning environments, (6) Support middle and high school educator training, and (7) Foster informal education and public outreach. Proposals to LaSPACE programs should explicitly support one or more of these seven objectives.

LaSPACE Program Administration & Institutional Coordinators

General administration and management is the responsibility of the LaSPACE Staff headquartered at Louisiana State University (LSU). Questions about applications to any LaSPACE programs should be directed to the Director or Assistant Director via the general <u>laspace@lsu.edu</u> email address. Unless otherwise directed, all proposals, invoices, reports, and queries should be submitted via email to the program email address (<u>laspace@lsu.edu</u>). LaSPACE Program Office, <u>laspace@lsu.edu</u>, 225-578-8697

LSU Department of Physics & Astronomy |364 Nicholson Hall, Baton Rouge, LA 70803 T. Gregory Guzik, Director, <u>tgguzik@lsu.edu</u> | Colleen H. Fava, Assistant Director, <u>colleenf@lsu.edu</u> | Meaghin Woolie, Program Manager, <u>mwooli2@lsu.edu</u> | Doug Granger, Student Flight Program Manager, <u>dgrang2@lsu.edu</u>

Additionally, all member institutions have appointed an institutional coordinator who sits on the LaSPACE Advisory Council and is available to discuss opportunities and processes related to LaSPACE programs. Contact information for all advisors is provided below. For institutions with a vacancy, contact the program manager listed above.

LaSPACE Affiliate Institutional Coordinators

Baton Rouge Community College (BRCC)	Sandra Guzman	guzmans@mybrcc.edu	225-216-8213
BREC / Highland Road Park Observatory (HRPO)	Christopher Kersey	observatory@brec.org	225-768-9948
Cain Center for STEM Literacy (Cain Center)	Frank Neubrander	fneubr1@lsu.edu	225-578-4082
Delgado Community College (DCC)	Raymond Duplessis	rduple@dcc.edu	504-671-6419
Dillard University (Dillard)	Abdalla Darwish	adarwish@dillard.edu	504-816-4840
Grambling State University (GSU)	Matthew F. Ware	waremf@gram.edu	318-274-2391
Louisiana Arts and Science Museum (LASM)	vacant	vacant	vacant
La Board of Elementary & Secondary Education (BESE)	Ann Wilson	Ann.wilson@la.gov	225-342-0140
Louisiana Board of Regents (BOR)	Jessica Patton	jessica.domingue@la.gov	225-342-4253
Louisiana Business and Technology Center (LBTC)	Roy Keller	rkeller@lsu.edu	225-578-3985
Louisiana Public Broadcasting (LPB)	Christina Melton	cmelton@lpb.org	225-757-4215
Louisiana State University and A&M College (LSU)	Stephen D. Beck	<u>sdbeck@lsu.edu</u>	225-578-5833
Louisiana State University at Alexandria	Gerard Dumancas	gdumancas@lsua.edu	318-427-4436
Louisiana State University Agricultural Center (LSU-Ag)	Wade Baumgartner	wbaumgartner@agcenter.lsu.edu	225-578-7742
Louisiana State University Health Sciences (LSUHSC)	Lynn Harrison	lclary@lsuhsc.edu	318-675-4213
Louisiana State University of Shreveport (LSU-S)	Urska Cvek	urska.cvek@lsus.edu	318-795-4266
Louisiana Tech University (LaTech)	Mary Caldorera- Moore	mcmoore@latech.edu	318-257-2207
Loyola University (Loyola)	Martin McHugh	mmchugh@loyno.edu	504-865-2451
McNeese State University (McNeese)	Ning Zhang	nzhang@mcneese.edu	337-475-5873
National Center for Biomedical Research & Training (LSU-NCBRT)	Jason Krause	jkrause@ncbrt.lsu.edu	225-578-0285
Nicholls State University (Nicholls)	Matt Marlow	matthew.marlow@nicholls.edu	985-448-4576
Northshore Technical Community College (NTTC)	Chuck Crabtree	charlescrabtree@northshorecollege.edu	985-545-1231
Northwestern State University of Louisiana (NSULA)	Anna Dugas	<u>dugasa@nsula.edu</u>	318-357-5519
Nunez Community College (NCC)	Andreas Pashos	<u>apashos@nunez.edu</u>	504-278-6287
River Parishes Community College (RPCC)	Esperanza Zenon	ezenon@rpcc.edu	225-743-8713
SciPort Louisiana's Science Center	vacant	vacant	vacant
Southeastern Louisiana University (SELU)	Gerard Blanchard	gerard.blanchard@selu.edu	985-549-2159
Southern University and A & M College (SUBR)	Michael Stubblefield	michael_stubblefield@subr.edu	225-771-5231
Southern University of New Orleans (SUNO)	Illya Tietzel	itietzel@suno.edu	504-286-5111
Tulane University (Tulane)	Mark J. Fink	fink@tulane.edu	504-862-3568
University of Louisiana at Lafayette (ULL)	Afef Fekih	afef.fekih@louisiana.edu	337-482-5333
University of Louisiana at Monroe (ULM)	Ken Leppert	leppert@ulm.edu	318-342-1918
University of New Orleans (UNO)	Matthew Tarr	mtarr@uno.edu	504-280-1038
Xavier University of Louisiana (Xavier)	Ashwith K. Chilvery	achilver@xula.edu	504-520-5149

LaSPACE Requirements and Restrictions

In this section, requirements and restrictions applied to all LaSPACE programs are summarized. Additional requirements and restrictions pertaining to individual programs offered by LaSPACE are detailed later in these guidelines.

Public Nature of Applications to LaSPACE

Once an application is received in the LaSPACE office, it becomes public record. Although the staff will not disseminate applications to individuals other than to reviewers, applicants should be aware that, if a request for information is made by the public (e.g., the news media), a copy of the application, by law, must be provided.

Disclosure of Information

All LaSPACE programs must conform to applicable Federal, State and NASA regulations and stipulations. This includes annual reporting of award participant information to both the Louisiana Board of Regents and NASA. Part of this information will include both directory information such as name, address, telephone number, date of birth, and demographic information such as gender, ethnicity, and race for all award participants including faculty, staff, and students. Further, LaSPACE outreach includes public dissemination of its supported programs through *The Spaceporter Newsletter*, the LaSPACE website (<u>https://laspace.lsu.edu/</u>), as well as papers and/or presentations at Space Grant or related Education & Public Outreach conferences. The contents of award reports, including participant names, titles, institution, project summaries, results or conclusions and images, might be included in such public outreach articles. It is not intended that these public articles will disclose directory or demographic information except as aggregated statistical data.

Diversity

It is a national priority to increase diversity in Science, Technology, Engineering, and Mathematics (STEM), from university students, faculty, and staff to industry employees. Traditionally, minority groups and women have been under-represented in the STEM disciplines as students and faculty as well as in the workplace after graduation. LaSPACE is committed to addressing this priority and utilizing its programs, to the degree possible, to increase the diversity among its awardees. <u>All proposers are encouraged to help recruit diverse participants</u> to their proposed projects.

Animal Use

Any project proposing the use of an animal model for validation <u>must include a local IACUC approval letter, fully</u> <u>signed, which specifies a validity period longer than the proposed project period</u>. Failure to obtain the Institutional Animal Care and Use Committee's approval in advance, is grounds for returning the proposal unreviewed. Attach the IACUC material as an additional appendix.

Human Subjects

Projects that involve human subjects are <u>not acceptable</u> for this program.

Eligibility

PI must be associated with a LaSPACE affiliated institution. PI must be a research or tenure-track faculty member or designated institutional representative recognized by LaSPACE. All NASA funded participants must be U.S. citizens. Additional, or altered, restrictions may apply to specific programs.

Concurrent, Overlapping, and Consecutive Awards

PIs may hold more than one LaSPACE Award concurrently with some restrictions. First, no student may be funded simultaneously via multiple awards in the scholarship/fellowship programs (GSRA, Fellows, LURA, MRS, & HIS programs). Consecutive, non-overlapping awards in these program areas may be issued to exceptional students in the midst of extended research. Proposals for additional year(s) of funding may be submitted if 1) the previous period of performance has recently past or is 60 days or less from completion, 2) must explicitly reference the completion of proposed tasks from the current/previous award within the new proposal, 3) must include a final report, or preliminary final report if still in progress, in an appendix, and 4) must clearly state the objectives and goals for the new proposal differentiating said goals from the prior work.

Budgeting

Capital Equipment purchases, Tuition, and Foreign Travel are, in general, not allowable costs.

Disbursement of Funds

LaSPACE Award fund distribution will be managed by the applicant's college or university, either via a costreimbursable subcontract if the applicant is at an affiliate other than LSU, or by transfer of funds from LaSPACE to the applicant's department for projects at LSU. The institution/department will assume responsibility for administering, distributing, and documenting costs charged to this program.

Period of Performance

Unless otherwise stated, LaSPACE programs have a default period of performance of no greater than 12 months. Shorter periods of performance may be proposed, or even required by the LaSPACE office, to meet any requirements or restrictions related to the parent grant. *A proposed period of performance is provided for each program cycle on the summary page; proposers may request a different period within 60 days from our proposed start date, unless otherwise indicated. Proposers may not request a date any earlier than that which was listed by LaSPACE. Modified PoPs will be considered but not promised. No cost extensions (NCEs) for ongoing projects may be submitted to the LaSPACE program office no later than 60 days before the initial project end-date. All NCE requests must include a status report which addresses all accomplishments made to-date on the project (including all publications, proposals, presentations, patents, etc), where the project is in relation to the originally proposed end date, reasons why the project has been delayed, and a proposed plan for completing the project. This status report must also identify all participants on the project (students, post-docs, faculty, and staff).*

Senior Design Project Support Program

Application Guidelines

About the Senior Design Program

The Senior Design Project Support Program is meant to offer supplemental funding in support of high-level student-led research and design projects conducted under the auspices of a formal Senior Design or Capstone Course, and typically involve participation from 2-5 students. Projects must show clear relevance to NASA's mission and ongoing research at one or more of the NASA centers/under the umbrella of one or more of the four mission directorates. This funding source is meant to supplement the cost of materials and supplies and/or travel for competitions related to such formally established senior design projects/courses.

Background and Objectives

The State of Louisiana's prime goal is to develop a well-trained, technical workforce capable of moving the state forward in R & D, attracting high tech industries, and promoting economic development. This is precisely what NASA desires and what LaSPACE is working to achieve. The core focus of the LaSPACE program continues to be student involvement in genuine scientific research and engineering projects.

PI Eligibility

Proposals to the Senior Design RFP may be submitted only by qualified faculty members at a LaSPACE affiliate academic institution. This person becomes the project's Principal Investigator (PI) and is responsible for administering the funds, monitoring the student teams as they develop their projects, and managing the team's reporting requirements to LaSPACE.

Award Funds

Senior Design awards are capped at \$4,000. The proposal may include costs for materials, supplies, and support for constructing/testing student products, and may include travel costs if a competition is associated with the final deliverable. A strict cost-share is not required, but some institutional investment will be reviewed favorably. The Senior Design Project Support Program is meant to supplement the cost of developing and building a final product as part of a formal Senior Design or Capstone Course at the PI's institution. Wages of any kind are not an allowable cost on a project of this type.

Final Deliverables

At the end of the project, two final reports are required: the Final Technical Report and the Final Financial Report (Last invoice marked "final"). These reports are due within 30 days of the subcontract expiration date.

The Final Technical Report will be a multi-page write-up that is suitable for transmission to NASA and BOR. This report must follow the guidelines provided by the LaSPACE office and should describe the activities undertaken, the participants, and your assessment, as Principal Investigator(s), of the success of the venture, the impact that it had (or will have), any follow-on proposals in preparation/submitted and any further plans for a continuation of this or similar projects. Photographs of and testimonials from student participants should be incorporated. An updated Student Participant List must be included. This report shall be submitted to LaSPACE office (laspace@lsu.edu) via email.

Senior Design Proposal Requirements & Format

Senior Design proposals should be submitted as fully searchable pdf documents via email to <u>laspace@lsu.edu</u>. Proposals must include the following completed sections in the order presented:

- LaSPACE Cover Page
- Proposed Project Summary Form
- Prior LaSPACE Awards Form (most recent 5 years)
 - A. Proposal Narrative (not to exceed 5 pages)
 - 1. Introduction: State the problem to be addressed & Explicitly cite the Senior Design Course Number(s) and general requirements for this course on your campus.
 - 2. Background research summary
 - 3. Implementation Methodology with Timetable (The methodology to be employed in the project should be succinctly described. A concise timetable, preferably in a tabular form, should be provided. Key steps or milestones toward the successful completion of the project should be shown in this table. Background information should be provided as needed).
 - 4. Explicit alignment with research goals or priorities for any of NASA's Mission Directorates or Centers.
 - 5. Project Team: List identified student team members (name, classification, major, project role) in the Student Participant List. If students are to be selected after award, submit this list as soon as students are recruited. Include the expected number of students to be recruited and the recruitment plan/schedule for your campus's Senior Design courses.
 - 6. NASA Media Release Form (completed by PI and all identified student participants)
 - 7. Anticipated outcomes for student learning and development, including professional development activities such as poster presentations, written reports, competitions, etc.
 - 8. Evaluation procedure/mechanism
 - B. Budget
 - 1. LaSPACE Budget Form
 - 2. Budget Justification: narrative explanation of all costs. Note: It is hoped that for a student team award of this type, your institution will be willing to forego some or all of the indirect charges. Waived indirect may (should) be used as institutional matching funds.
 - C. Principal Investigator Short CV (1-2 pages)

Attachments Required Proposal Forms

Required Forms for Proposal

All proposals submitted to LaSPACE must use the forms included following this page. Proposals not using these forms may be rejected without review.

- Cover Sheet
- Proposed Project Summary
- Prior LaSPACE Awards
- Proposal Budget Form
- Student Participant List (online form completion certification)
- NASA Media Release Form (completed by PI and all identified student participants)

LaSPACE Senior Design Program Proposal Cover Sheet

1.	Title of Proposed Projec	t:			
2.	Principal Investigator:				
		(Name)	(Highest Degree Earned)	(Citizenshi	p)
		(Department)			
3.	Institution of Higher Edu	ucation:			
4.	Address:		ox Number)		
	(Street	Address/P.O. Bo	ox Number)		
	(City, Si	ate)	(Zip Code)		
5.	Telephone:		FAX:		
	E-mail:				
6.	Date of Submission:				
7.	Total Funds Requested:	\$	Institutional Match:\$		
***	*****	*****	******	*****	
signa agre instif not l resp with Com	atories certify that the stateme e to comply with LaSPACE awar cution and proposed project are imited to, Executive Order 125- consibilities; Non-Discrimination China Funding Restriction as d pliance in accordance with 534	nts made in this pro- rd terms and condi- e in compliance wit 49, Debarment and c; Certification again etailed in Public Lav of the Consolidate	e Orders and U.S. Code: By signing and soposal are true and complete to the best tions if an award is made as a result of the hall applicable Federal and State laws at Suspension, 34 CFR Part 85, Section 85 nst Lobbying imposed by section 1352, the soft 112-10 Section 1340(a) and 112-55, so and Further Continuing Appropriation ny conviction (sections 544 and 543 of Federal State and State Stat	t of their know his proposal; ar and regulations .510, Participar title 31, U.S. Coo Section 539; AC as Act of 2012 (I	ledge; they nd the including, but nt's de; Compliance ORN Pub. L.112-55);
8.	Signature of Principal In	vestigator:			
9.	Name of Authorized Inst	titutional Rep:			
10.	Signature of Authorized	Institutional Re	p:		
11.	Date Signed:				

Proposed Project Summary

NAME OF INSTITUTION (INCLUDE BRANCH/CAMPUS AND SCHOOL OR DIVISION)
ADDRESS (INCLUDE DEPARTMENT, BUILDING & ROOM #, CITY, STATE, ZIP)
PRINCIPAL INVESTIGATOR NAME, TITLE, & EMAIL
PROJECT TITLE
PROPOSED PROJECT START DATE
08/15/2021 – 08/14/2022
ABSTRACT (DO NOT EXCEED 250 WORDS)

Prior LaSPACE Awards

(Limit this list to the last 5 years)

For each prior LaSPACE award, as a PI or a Co-I please provide the following:

1.	Project Title:		
2.	Dates:		
3.	Was a final te	hnical report submitted?YESNO*	
	If no, explain:		
4.	Did a proposa	to a funding agency result?NOYES	
	lf yes,	Agency:	
		Title:	
		Date:	
		Status:FundedDeclinedPending	g

(Add additional pages as necessary.)

LaSPACE Proposed Budget Form

Include this form in your proposal. Be sure to only ascribe funds to categories explicitly open to the program area to which you are applying. Following this form, include a detailed narrative explanation of all proposed costs.

Proposal Title:	
Principal Investigator: _	
Institution:	

	LaSPACE Funds Requested	Institutional Match Funds
A. Direct Labor		
1. Researchers	\$	\$
2. Graduate Student(s)	\$	\$
3. Undergraduate Student(s)	\$	\$
4. Fringe Benefits	\$	\$
5. Subtotal A	\$	\$
B. Supportive Expenses		
1. Travel	\$	\$
2. Supplies & Materials	\$	\$
3. Communications & Equipment	\$	\$
4. Other Direct Costs (Identify)	\$	\$
5. Subcontracts	\$	\$
6. Subtotal B	\$	\$
7. F&A (Indirect)	\$	\$
1	1	
C. Total Project Cost		
	\$	\$

*Must be certified on all financial billings/reports.

Student Participant List

Student Participant List must be completed and online demo forms filled out in advance of submitting this application. If students are to be selected after award, you must commit to completing these forms **as soon as students are recruited** to the project and submitting a completed table once students have completed their online forms

Name	Classification	Major	Project Role
e.g. Jane Smith	Undergraduate, Junior	Electrical Engineering	Electrical Design Lead; Technical Writing Co- Lead

Link to Undergraduate Student Participation Form Link to Graduate Student Participation Form

□ Check this box to confirm that all students listed above have completed an online participant form.

□ Check this box to commit that all recruited students will complete the online form as soon as they are recruited.

Online Student Participant Form Guidance (applicable to all submissions):

Please provide the following guidance to students completing the online participant form.

- The online form should be completed and submitted by all student participants.
- Upon completion of the form, students will see an option to "print or get PDF of answers." It is recommended that students save a copy of their answers to their local device for their own records.
- The **Faculty Advisor/ Mentor (question 12)** should be the PI who is submitting this proposal. Please provide the students with your office phone number and email address to input.
- The **Program (question 15)** should be the program for which students are currently applying/participating in. If working under multiple LaSPACE projects, students will submit a demographic form for each separate project.
- The **Project Start Date (question 16)** should be 8/15/2021 for students under this current proposal submission.
- The Participating Semester(s) should be the "Fall 2021, Spring 2022, Summer 2022" option.



I, Click or tap here to enter text., hereby give permission to be interviewed, photographed, and/or videotaped.

I understand and agree that the text, photographs, and/or videotapes thereof containing my name, likeness, and voice, including transcripts thereof, may be used in the production of instructional, promotional materials, and for other purposes that NASA deems appropriate; and such materials may be distributed to the public and displayed publicly one or more times and in different formats, including but not limited to, websites, cablecasting, broadcasting, and other forms of transmission to the public.

I also understand that this permission to use the text, photographs, videotapes, and name in such material is not limited in time and that I will not receive any compensation for granting this permission.

I understand that NASA has no obligation to use my name, likeness, or voice in the materials it produces, but if NASA so decides to use them, I acknowledge that it may edit such materials. I hereby waive the right to inspect or approve any such use in advance or following distribution or display.

I hereby unconditionally release NASA and its representatives from any and all claims and demands arising out of the activities authorized under the terms of this agreement. By signing below, I represent that I am of legal age, have full legal capacity, and agree that I will not revoke or deny this agreement at any time.

I have read the foregoing and fully understand its contents.

Accepted by:

Signature: Click or tap here to enter text. Date: Click or tap here to enter text.

Address: Click or tap here to enter text. Cell Phone: Click or tap here to enter text. Email Address: Click or tap here to enter text. Name and Location of Event: Media related to a NASA Space Grant / NASA EPSCoR 2021 Project

Note: This release pertains to my likeness captured by LaSPACE / LA NASA EPSCoR program staff and/or funded participants, as well as media I submit to the LaSPACE Management office documenting experiences related to this Project. This release is valid for all documentation submitted or released for the duration of the project. This waiver gives LaSPACE/LaNASA EPSCoR team, LSU, the LA BoR, & NASA permission to share my likeness.

