



# 2019 MSSGC SEED GRANTS IN NASA STEM

*The Mississippi Space Grant Consortium (MSSGC) is soliciting seed grant proposals in any STEM related field that has relevance to NASA. The research initiation grants are aimed at strengthening research competitiveness and collaboration and creating research opportunities for undergraduate and graduate students.*

**Title: MSSGC Seed Grants in NASA STEM**

**Sponsored By: Mississippi Space Grant Consortium**

**Submit Applications to: [nmurray@olemiss.edu](mailto:nmurray@olemiss.edu)**

**APPLICATIONS MAY NOT BE SUBMITTED IN PAPER FORMAT**

## Key Dates

1. Release/Posted Date: **July 23<sup>rd</sup>, 2019**
2. Application Due Date: **Friday, August 30<sup>th</sup>, 2019, 5:00pm**

**\*\*\*\*\* No late submissions will be accepted \*\*\*\*\***

# Table of Contents

<b>Table of Contents .....</b>	<b>ii</b>
<b>Section 1. Solicitation Details.....</b>	<b>1</b>
<b>1.A. Introduction.....</b>	<b>1</b>
<b>1.B. Period of Performance .....</b>	<b>1</b>
<b>1.C. Number and Size of Awards.....</b>	<b>1</b>
<b>1.D. Eligibility.....</b>	<b>1</b>
<b>1.E. Guidelines.....</b>	<b>1</b>
<b>Section 2. Relation to the Goals of the MS Space Grant Consortium .....</b>	<b>2</b>
<b>2.A. ABOUT Research Infrastructure Development (RID).....</b>	<b>2</b>
<b>2.B. Goals, Objectives, and Priorities .....</b>	<b>2</b>
2.B.i. Goals.....	2
2.B.ii. Objectives .....	2
2.B.iii. Priorities.....	3
<b>Section 3. Proposal Evaluation.....</b>	<b>3</b>
<b>Section 4. Reports .....</b>	<b>3</b>
<b>4.A. Progress Report.....</b>	<b>3</b>
<b>4.B. Final Report .....</b>	<b>4</b>
<b>4.C. Reporting of Statistics.....</b>	<b>4</b>
<b>Section 5. Proposal Submission Instructions .....</b>	<b>4</b>
<b>5.A. Content and Form of Application.....</b>	<b>4</b>
5.A.i. General rules .....	4
5.A.ii. Research Description (3 pages maximum for items A through F) .....	4
5.A.iii. Bio of Key Personnel (No page limit).....	5
5.A.iv. Budget.....	5
<b>5.B. Submission Deadline .....</b>	<b>5</b>
<b>5.C. Submission Requirements .....</b>	<b>5</b>
<b>MSSGC Terms of Agreement.....</b>	<b>6</b>

## Section 1. Solicitation Details

### 1.A. INTRODUCTION

The Mississippi Space Grant Consortium (MSSGC) is soliciting seed grant proposals in any STEM related field that has relevance to NASA. The research initiation grants are aimed at strengthening research competitiveness and collaboration and creating research opportunities for undergraduate and graduate students.

### 1.B. PERIOD OF PERFORMANCE

Proposers may request a **period of performance starting no earlier than October 1, 2019 and ending no later than October 31, 2020.**

### 1.C. NUMBER AND SIZE OF AWARDS

The MSSGC Director anticipates funding up to two (2) awards of \$30,000 each.

### 1.D. ELIGIBILITY

The principle investigator (PI) must be a faculty/staff in a NASA-related STEM field employed at one of the following Mississippi institutions of higher learning: JSU, ASU, DSU, MUW, MVSU, ICC, CCC, MCC, MDCC, HCC, MGCCC, NEMCC, PRCC, JCJC, SWCC, Tougaloo College, Rust College, Copiah-Lincoln CC, and East Miss. CC. Collaborators may include faculty/staff from any Mississippi institution of higher learning.

The scope of “NASA-related STEM fields” is very broad as defined by 14 CFR 1259.101(a): “*Field related to space* means any academic discipline or field of study (including the physical, natural and biological sciences, and engineering, space technology, education, economics, sociology, communications, planning, law, international affairs and public administration) which is concerned with or likely to improve the understanding, assessment, development and utilization of space.”

### 1.E. GUIDELINES

A variety of different types of projects may be proposed within the following guidelines:

1. **Collaboration in Required:** The project must involve either collaboration between departments within the PI’s home institution or collaboration between institutions within the state. This requirement could be met in a number of different ways. This may involve a partnership with one or more departments/schools. Or, it may involve a partnership with another college or university within the state. Or, it may involve a partnership with a research center or an aerospace-related company within the state. Collaborations with institutions outside of the state do not meet this requirement.

2. **There must be a 1:1 match on all requested funds.** The match may be met with either in-cash or in-kind cost sharing. Requested funds may be used for faculty support, student support, and supplies. No equipment may be purchased with Space Grant funds. Funds for domestic travel may be included in the requested funds within reason.

3. If Space Grant funds are to be paid to an individual (as a stipend or faculty summer support); ***all individuals receiving Space Grant funds must be U.S. citizens.***

4. The research project ***must involve both faculty and students.***

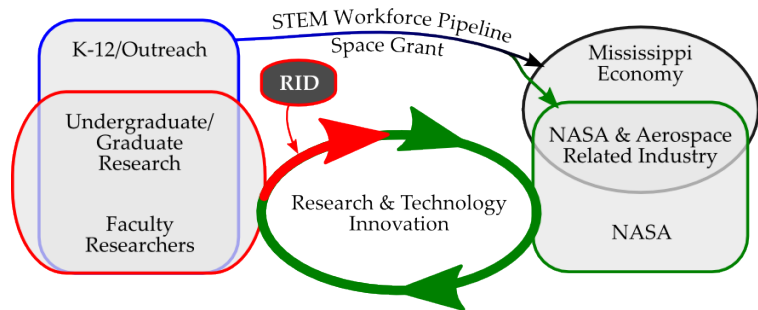
5. There must be a commitment to promote diversity in STEM engagement throughout the project.

The successful proposal will demonstrate alignment with NASA priorities, involve an interdisciplinary team, and directly involve students. Ties to or direct involvement with a NASA Center or an aerospace-related company are encouraged but not explicitly required. Proposals should include statements about the broader impacts of the proposed work; for example, to encourage students to pursue graduate degrees in STEM, to enhance research partnerships, to engage the public in STEM education, etc.

## Section 2. Relation to the Goals of the MS Space Grant Consortium

### 2.A. ABOUT RESEARCH INFRASTRUCTURE DEVELOPMENT (RID)

The Mississippi Space Grant Consortium (MSSGC) is committed to supporting research infrastructure development (RID) activities that strengthen Mississippi's research competitiveness. Individual seed grants are expected to (a) build on core strengths, (b) focus these strengths on issues of particular relevance to NASA, and (c) increase the applicability of Mississippi's research to areas of interest within NASA. MSSGC uses RID activities to fill a unique role by infusing NASA investment into human research asset development. The goal is to provide initiation funds to set in motion the maturation of innovative research, instruction, and training ventures that are relevant to NASA and NASA related Mississippi industry. The competitive seed grant opportunities are focused on developing research activities that **explore** promising research avenues, **establish** or strengthen collaboration between researchers in the state, and **enhance** MS research relevance to NASA through communication/collaboration with NASA scientists.



### 2.B. GOALS, OBJECTIVES, AND PRIORITIES

#### 2.B.i. Goals

The MSSGC RID activities align with the overarching goals of NASA Education and complement Mississippi's efforts to grow and attract aerospace and aerospace-related industry.

- A. Mature innovative research and technology ventures that are **relevant to NASA** and the national space mission.
- B. Evolve Mississippi's academic research enterprise leading to long-term, self-sustaining, **nationally-competitive capabilities** in NASA related fields.
- C. Promote growth in the **economies of Mississippi** and expand the national base for NASA related research and development.

#### 2.B.ii. Objectives

- A. Increase the number and diversity of entities that are actively performing research in Mississippi of **strategic importance to NASA**.
- B. Improve **Mississippi research competitiveness** allowing researchers to succeed in gaining support from other funding sources.

- C. Develop **partnerships** between NASA research assets, Mississippi academic institutions, and Mississippi NASA-related industry.
- D. Support the overall **Mississippi STEM workforce development** by graduating scientist and engineers that contribute to the overall research infrastructure, science and technology capabilities, higher education, and economic development of Mississippi.
- E. Create research activities that coordinate with Space Grant for overall **STEM education enhancement** in Mississippi.

**2.B.iii. Priorities**

- A. Perform scientific and/or technical research of relevance to NASA that support the strategic research and technology development priorities of one or more of NASA’s four Mission Directorates, the Office of the Chief Technologist, and/or one or more of the ten NASA Centers.
- B. Initiate and mature research that has a positive potential impact on Mississippi’s research competitiveness.
- C. Develop active partnerships between the MSSGC research universities, HBCUs, Mississippi businesses, and/or NASA Centers.
- D. Develop a workforce (faculty & student involvement) in areas of interest to NASA and aligned with the Mississippi Science and Technology Plan.
- E. Encourage participation from under-represented groups.

**Section 3. Proposal Evaluation**

Proposals will be evaluated with the following rubric:

<i>Evaluation Elements</i>	
Relevance to NASA	<b>10</b>
Strength of Interdisciplinary Team	<b>10</b>
Potential for Growth and Development	<b>10</b>
Clearly Defined and Realistic Goals/Outcomes	<b>10</b>
Workforce Development - Students	<b>10</b>
<i>Is there a clear plan for student involvement/mentoring?</i>	
<b>SCORE</b>	<b>50</b>

**Section 4. Reports**

**4.A. PROGRESS REPORT**

The principle investigator will be required to submit a mid-year progress report to the Mississippi Space Grant Director ([nmurray@olemiss.edu](mailto:nmurray@olemiss.edu)) summarizing the results of the project, the names of the faculty and students involved, and any measurable outcomes such as proposals submitted to

federal and/or state agencies for further funding and papers submitted for presentation and/or publication.

**PROGRESS REPORT DUE: 15 January 2020**

#### **4.B. FINAL REPORT**

The principle investigator will be required to submit a final report to the Mississippi Space Grant Director ([nmurray@olemiss.edu](mailto:nmurray@olemiss.edu)) summarizing the results of the project, the names of the faculty and students involved, and any measurable outcomes such as proposals submitted to federal and/or state agencies for further funding and papers submitted for presentation and/or publication.

**FINAL REPORT DUE: 60 days after end date of the project**

#### **4.C. REPORTING OF STATISTICS**

MSSGC is required to report to NASA on the measurable outcomes (publications, presentations, new proposals), participant demographics, and degrees awarded. MSSGC will provide the PI with excel spreadsheets for reporting these statistics well in advance of the reporting due dates. A completed spreadsheet must be included with both the progress report and final report.

### **Section 5. Proposal Submission Instructions**

#### **5.A. CONTENT AND FORM OF APPLICATION**

##### **5.A.i. General rules**

- A. Incomplete applications will NOT be considered. Late applications will NOT be considered. Applications containing plagiarized or incorrect information will NOT be considered. Non-compliant applications will NOT be considered.
- B. The text must be no smaller than 12-point font, single-spaced, with 1" margins on all sides.
- C. The proposal should address the goals/objectives/priorities in Section 2 above.
- D. The entire proposal package should be submitted as a single PDF electronic file.

##### **5.A.ii. Research Description (3 pages maximum for items A through F)**

- A. **Summary:** (1 page maximum of the 3 page limit) Please give a thorough but basic overview of the project background. Remember, reviewers will have appropriate knowledge, but will likely not be experts in your field. Write in a way that is understandable to those in other disciplines, define terms where necessary, explain issues clearly, and proofread carefully. Include (1) information that will clarify your project; (2) the main project goal or purpose of your project; (3) need for this project to be conducted; and (4) any preliminary results that you may have.
- B. **Objectives:** Describe the objectives, the expected outcomes and impact. Describe the relevance of the proposed work to NASA. Provide the number and names of participants, faculty, undergraduate and graduate students.
- C. **Statement of Work:** List and describe the specific tasks of your project. Explain the methods that will be used to complete the tasks. Briefly list any facilities, equipment or other resources you will have at your disposal for the completion of the described project.
- D. **Outreach:** Describe how you plan to disseminate information garnered from your study.
- E. **Deliverables and Timeline:** Include a timeline of your planned research.

**F. References Cited:** (does not count toward page limit) Please use the same style for all citations: APA, MLA, etc.

**5.A.iii. Bio of Key Personnel (No page limit)**

Include a short (1-paragraph) biographical sketch of the key personnel (PI, graduate student, etc.) that will directly contribute to the project.

**5.A.iv. Budget**

**A. Budget Summary:** (1 page maximum) Provide a 1-page budget summary in the form of a table that clearly identifies personnel, supplies, commodities, and other research related expenses requested and the cost of each. Make sure that items are compliant with your institution's spending and reimbursement policies.

**B. Budget Justification:** (2 pages maximum) The maximum amount of Space Grant funds that can be requested for this effort is \$30,000 with a 1:1 match requirement. The budget justification should contain an explanation of the requested budget. Acceptable items for the budget are faculty salary, student wages, and commodities. NASA funds **cannot** be used for equipment. The source of the required 1:1 match must be explained.

**5.B. SUBMISSION DEADLINE**

Proposals should be submitted by **Friday, August 30<sup>th</sup>, 2019, 5:00 pm.**

**5.C. SUBMISSION REQUIREMENTS**

Submit the complete application as a single PDF document via email to the MSSGC Director, Dr. Nathan Murray, [nmurray@olemiss.edu](mailto:nmurray@olemiss.edu).

Applicants will compile all required parts of the proposal into **one** PDF document. The document will include Research Description, Bio of Key Personnel, Budget, and signed Terms of Agreement Form (form is page 6 of this document).

For questions, contact the MSSGC Director, Dr. Nathan Murray, The University of Mississippi, University, MS 38677, [nmurray@olemiss.edu](mailto:nmurray@olemiss.edu), 662-915-3190.



# MSSGC Terms of Agreement

<b>Last Name:</b>	<b>First Name:</b>	<b>Middle Initial:</b>
<b>Department:</b>	<b>Phone:</b>	
<b>Email:</b>		

Contact Information will be used solely for contacting awardees.

1. The **Awardee** will use the funds only for those things outlined in their budget proposal, based on the MSSGC Program Guidelines and compliant with applicable University rules and regulations. All receipts must be saved in case an inquiry is made in this regard.
2. The **Awardee** will submit the progress report and final report as required.
3. The **Awardee** will provide MSSGC with project information as requested to comply with MSSGC reporting to NASA.
4. The **Awardee's** name and project abstract may be used on the MSSGC webpage.

### Applicant's Certification

I understand and accept the terms and conditions set forth by the MSSGC Program.

\_\_\_\_\_

PI Signature

\_\_\_\_\_

Date