National Space Grant College and Fellowship Program
Opportunities in NASA STEM FY 2020 – 2024

Mississippi Space Grant Consortium

Program Description, Milestones, and Assessment

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Executive Abstract

The Mississippi Space Grant Consortium (MSSGC) is an integrated program to INSPIRE, ENGAGE, EDUCATE, and EMPOWER the next generation of Mississippi explorers through opportunities to engage with and contribute to NASA’s mission.

NASA’s Office of STEM Engagement (OSTEM) strives to leverage NASA’s unique resources as a powerful context for inspiration and student learning. MSSGC’s program engages with this mission through utilization of NASA resources and contribution to NASA’s objectives. Broadly, MSSGC operates a coordinated network that (1) funds opportunities for students to engage with the NASA mission at the undergraduate and graduate level, (2) pilots research and educational programs that enhance the STEM ecosystem in Mississippi, and (3) disseminates NASA resources and information about NASA’s needs and objectives through a statewide affiliate network.

MSSGC GOALS are to “Engage” – establish a distributed network of programs that directly supports research and education in NASA-relevant STEM pursuits throughout the state; “Empower” – on an individual level, equip and inspire students, particularly those from underrepresented groups, to pursue careers in Science, Technology, Engineering and Mathematics; “Enhance” – Enhance and nurture the STEM-learners’ educational/support network to insure development of a STEM-literate, NASA-relevant workforce for Mississippi and the Nation; and “Enlighten” – Contribute to the general scientific literacy of the population.

The MSSGC program involves four program elements: (1) Internships & Fellowships (NIFs); (2) Affiliate Programs; (3) Competitively Awarded Activities; and (4) Foundations in STEM.

MSSGC Affiliates carry out NASA-relevant programs that include mentoring, lab experiences, pre-service training, tutoring, scholarships, and outreach. MSSGC has eighteen affiliate institutions: the State’s four comprehensive and four regional universities, and ten MS community colleges. Five of its affiliates are Historically Black Colleges and Universities (HBCUs), and one is an institution serving primarily women. MSSGC delegates funding to its Affiliates to establish local programs that engage with or contribute to NASA while focusing on the particular needs of the geographic region.

Competitively awarded activities include Student-Led STEM Activities (e.g. Space Cowboys high-powered rocketry team, the Rebel Rockets rocketry team, the MSU Robotic Mining Competition team, and High-Altitude Ballooning Exploration teams), Research Initiation Seed Grants (research opportunities with joint faculty/student engagement), and Mini-Grants in STEM Enhancement (e.g. Science Teacher Leadership Academy, FirstTech Robotics, and Summer STEM Camp).

Through its programs and affiliates, the MSSGC maintains a coordinated statewide network that contributes meaningfully to NASA O-STEM Objectives and the NASA Mission while also contributing to Mississippi's STEM workforce needs, K-12 teacher development needs, and promoting STEM to the general public.
Data Management Plan

The MS Space Grant Consortium (MSSGC) obtains the minimum awardee information necessary to meet reporting requirements set by NASA for the Space Grant Program.

PARTIES INVOLVED directly in MSSGC include the Director, Assistant Director, Affiliate Campus Coordinators, Faculty/Staff Awardees, and Student Awardees.

DATA are the minimum awardee information necessary to meet reporting requirements set by NASA for the Space Grant Program. This information is obtained through surveys and data tables. This information may include name, birth date, studentID, academic level, GPA, race, gender, citizen y/n, disabled y/n, military y/n, award amount, award start date, award end date, major, minor, anticipated graduation date, phone, email, address, education goal, highest degree attained, and work goal. This information may rise to a level requiring appropriate handling of PII.

RESPONSIBILITIES follow an upward reporting chain. Student data is requested by the Asst. Director from the Coordinators, Faculty/Staff Awardees, or directly from the Student Awardees. The Asst. Director is responsible for compiling all awardee information as needed for reporting purposes. The Director reviews the completed reports and has access to the data tables.

HANDLING of the DATA involves transmitting, storing, sharing, and preserving of the awardee information. MSSGC uses Box (https://www.box.com) for all DATA HANDLING activities. Box meets FedRAMP, FIPS 140-2, ISO 27001, and PCI DSS Level 1 standards. Box maintains certified compliance with HIPAA/HITech and ISO27018 standards. Additional security and compliance information is available at https://www.box.com/security. Box allows Coordinators and Awardees to securely upload data tables and survey results through encrypted connections. Box allows the Asst. Director and Director to have a shared workspace for storing, sharing, and preserving program data that meets federal regulations for maintaining the integrity of PII.

APPLICATION documents are submitted to MSSGC using InfoReady Review™, an online application submission and review software (https://www.inforeadycorp.com/). Similar to Box, InfoReady Review™ meets all necessary certifications for security of PII. Details and security reports can be obtained at https://www.inforeadycorp.com/it-resources.

RESTRICTIONS are placed on Box storage folders so that only the Director and Asst. Director have full access to the DATA. Other program participants have restricted access, and that access has expiration settings to ensure perpetual access is not allowed beyond the necessary reporting timeframes.

FORMATS may include image files, data tables, websites, and text documents.

TIMEFRAME settings depend on program reporting requirements. Data is maintained during the life of the program. Beyond the life of the project, summary data is maintained for up to five years to serve as benchmark data for future activities. This is handled at no cost to NASA as the lead institution (U. of Mississippi) provides MSSGC with access to a secure Box account.

THIRD PARTY DATA includes longitudinal tracking support provided by Education Programs Support Services (EPSS). Data is transmitted to EPSS via sharing on Box. All EPSS systems are fully FERPA, OWASP, PCI, and SSAE/SOC2 compliant and meet or exceed the US Dept. of Ed. data security recommendations. All EPSS systems receive regular external vulnerability scanning with vulnerabilities remediated within 7 days of discovery.
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1. Consortium Profile

The Mississippi Space Grant Consortium (MSSGC) has eighteen affiliate institutions including the State’s four comprehensive universities (UM, MSU, JSU*, USM), four regional universities (ASU*, MUW, DSU, MVSU*), and ten of the 15 MS community colleges (ICC, CCC*, MCC, MDCC, HCC*, MGCCC, NEMCC, PRCC, JCJC, SMCC). Five of its affiliates (indicated with *) are Historically Black Colleges and Universities (HBCU), and one is an institution serving primarily women (MUW). MSSGC programs reach a majority of the state’s students from all regions geographically and demographically through both statewide and affiliate activities. Seventeen of the affiliates are located in rural to small city areas with the HBCU Jackson State University the only affiliate in a large metropolitan area. MSSGC’s partnerships include all of the NASA Centers through student internships and research partnerships; Mississippi-based, NASA-related industries; informal science centers; and educational partners throughout the state, including the state’s two private HBCU’s (Rust College & Tougaloo College).

Management of the MSSGC is comprised of a Director, an Assistant Director, and a steering committee made of the Affiliate Campus Coordinators. The Director reports to the Mississippi Research Consortium (MRC),¹ which is comprised of the Chief Research Officers from Mississippi’s four comprehensive universities. The University of Mississippi is the lead institution and fiscal agent. The Director sets overall goals and objectives in accordance with NASA priorities and Mississippi STEM and economic development interests. The Director manages a portfolio of statewide competitive programs. The Affiliate Campus Coordinators are responsible for the day-to-day management of affiliate programs. The personnel at both levels work closely to accomplish the necessary administrative processes to keep MSSGC running effectively. Affiliate programs focus on the particular geographic region in the vicinity of the performing affiliate.

According to the US Census Bureau’s 2018 estimates, Mississippi ranks 49/50 for Educational Attainment: Bachelor’s degree or higher: 21.3% The median household income is $42,009 (the lowest). The percentage below poverty level is 19.8% (the highest). Just 83.4% of adults in Mississippi are high school graduates. Mississippi is mostly a rural state that is trying to make the transition from primarily an agricultural state to a manufacturing one and faces serious and complex issues in trying to educate the state’s population. MSSGC strives to fund programs that contribute to the STEM workforce needs, address K-12 teacher development needs, and promote STEM with the general public.

MSSGC invests 52% of its funding in statewide competitive programs. The awardees are required to show specific engagement with or contribution to NASA in order to receive funding from MSSGC. MSSGC delegates 24% of its funding to its Affiliates to establish local programs that likewise engage with or contribute to NASA while focusing on the particular needs of that geographic region: as MSSGC is to NASA OSTEM so are the Affiliates to MSSGC.

¹ http://www.mississippiresearch.org/
2. NASA Space Grant in Mississippi

The Mississippi Space Grant Consortium (MSSGC) proposes an integrated program to inspire, engage, educate, and empower the next generation of Mississippi explorers through opportunities to engage with and contribute to NASA’s mission.

2.1. ENGAGING WITH NASA’S MISSION

NASA’s mission involves every possible STEM (Science, Technology, Engineering, and Math) topic that exists. The phrase “Field Related to Space” encompasses 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.

NASA’s Office of STEM Engagement (OSTEM) strives to support this mission by leveraging NASA’s unique resources as a powerful context for inspiration and student learning.

MSSGC’s program engages with this mission through utilization of NASA resources and contribution to NASA’s objectives. Broadly, MSSGC operates a coordinated network that (1) funds opportunities for students to engage with the NASA mission at the undergraduate and graduate level, (2) pilots research and educational programs that enhance the STEM ecosystem in Mississippi, and (3) disseminates NASA resources and information about NASA’s needs and objectives through a statewide affiliate network.

2.2. GOALS

A. “Engage” – Establish a distributed network of programs that directly supports research and education in NASA-relevant STEM pursuits throughout the state.

B. “Empower” – On an individual level, equip and inspire students, particularly those from underrepresented groups, to pursue careers in Science, Technology, Engineering and Mathematics.

C. “Enhance” – Enhance and nurture the STEM-learners’ educational/support network to insure development of a STEM-literate, NASA-relevant workforce for Mississippi and the Nation.

D. “Enlighten” – Contribute to the general scientific literacy of the population.

2.3. OBJECTIVES

Specific, Measurable, Appropriate, Realistic, Timely (SMART)

In support of Goal A “Engage”

A1 – Fellowships: Annually, fund a minimum of 8 graduate fellows among the four comprehensive universities (UM, MSU, JSU, USM).

A2 – Internships: Annually, fund a minimum of 9 undergraduate internships between both NASA and MS Industry opportunities.

A3 – Affiliates: Annually, fund a minimum of 16 affiliate institutions to establish a state-wide distributed network for Space Grant in Mississippi.

A4 – Student-Led STEM: Annually, fund a minimum of 2 student-led STEM teams.
A5 – Seed Grants: Annually, fund a minimum of 2 seed grants in NASA STEM to foster collaboration and support research opportunities for undergraduates.

A6 – STEM Engagement: Annually, fund a minimum of 4 mini-grant activities to enhance K-12 STEM education in Mississippi.

A7 – Foundations: Annually, host a minimum of 50 participants in STEM efficacy training to enhance the STEM ecosystem in Mississippi.

A8 – Reach: Meet or exceed the (# of direct participants)/($1000 of direct NASA funds) on an annual basis (0.596 for 2018; not including NCAS).

In support of Goal B “Empower”

B1 – Obtain a Degree: Annually, successfully identify the next step after graduation for 80% of the students receiving significant direct awards by the program. (79.2% for 2014-2018 awards)

B2 – Remain in STEM Disciplines: Annually, at least 75% of the individuals receiving significant direct awards remain in STEM disciplines as evidenced by their next step after graduation. (74.5% for 2014-2018 awards)

B3 – Pursue Advanced Degrees: On average, over the course of the contract, for students receiving significant direct support, exceed the percentage of individuals that pursue advanced degrees by at least 40% as compared to the general population of individuals receiving comparable STEM degrees as reported by the National Association of Colleges and Employers. (34.3% for 2014-2018 awards vs. 24.6% for the general population receiving comparable STEM degrees = 39.3% increase)

B4 – Diversity, Women: On average, over the course of the contract, match or exceed the percentage of significant direct awards made to women to the percentage enrollment of women in 2016 as reported by the DoE NCES. (53.2 % for 2014-2018 awards – 60.0% target)

B5 – Diversity, Underrepresented: On average, over the course of the contract, match or exceed the percentage of significant direct awards made to racially or ethnically underrepresented individuals to the percentage enrollment of racially or ethnically underrepresented individuals in 2016 as reported by the DoE NCES. (41.3 % for 2014-2018 awards – 42% target)

In support of Goal C “Enhance”

C1 – Authentic Experiences: Annually, 75% of students supported by or participating in a MSSGC-sponsored program will agree2 with the statement, “I gained useful skills and experiences from my participation in this Space Grant program.”

C2 – Effectiveness: Annually, 75% of teachers participating in a MSSGC-sponsored event, will agree with the statement, “The material presented will make me a more effective STEM teacher.”

C3 – Inspire Future Generations: Annually, 80% of teachers working with MSSGC Graduate Fellows will agree with the statement, “The fellow’s presence in my classroom has inspired some of my students to pursue further study in the STEM fields who may otherwise have not.”

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In support of Goal D “Enlighten”

*D1 – Increase Awareness*: Annually, 75% of participants at MSSGC-sponsored educational programs/events will agree with the statement, “The material presented in this program has increased my awareness of current science or math issues.”

*D2 – NASA Opportunities*: Annually, 80% of MSSGC affiliates and partners will agree with the statement, “The MSSGC office has kept my campus abreast of relevant NASA and Space Grant opportunities and announcements.”

**NOTES on Evaluation of the Objectives**

- Objectives A1 through A7 are counted based on the initiation of grants/awards and counting of participants at events.
- Objective A8 is calculated based on the year-end total number of direct participants in all MSSGC activities.
- Objectives B1, B2 & B3 are evaluated through longitudinal tracking (Education Program Support Services, Mr. Mark Fischer) of program participants.
- Objective B4 & B5 are evaluated through awardee demographic data obtained voluntarily from the awardees.
- Objective C1, C2, C3, D1 & D2 are evaluated through participant surveys. Affiliates and awardees of the competitive grants/programs are required to conduct these surveys as appropriate based on the alignment of their projects with MSSGC objectives. Awardees provide survey-based results to MSSGC through progress and final reports.

**2.4. MSSGC PROGRAM ELEMENTS**

The MSSGC program involves four program elements: (1) internships & fellowships; (2) affiliate programs; (3) competitively awarded activities; and (4) foundations in STEM.

**2.4.1. NASA-relevant Internships & Fellowships (NIFs)**

- **INTERNSHIPS** are educational hands-on traineeships that provide unique NASA-related research and operational experiences for educators and high school, undergraduate, and graduate students. Internships integrate participants with career professionals emphasizing mentor-directed, degree-related, project task completion. NASA internships shall consist of at least 400 contact hours (320 for H.S. students or teachers) of mentored, degree-relevant, work-activity.
- **FELLOWSHIPS** are designed to support independently conceived or designed research by highly qualified faculty and graduate students in disciplines needed to help advance NASA’s missions. Fellowships afford students the opportunity to directly contribute to advancements in NASA’s STEM-related areas of study or STEM Education fields. NASA
fellowship opportunities are focused on innovation and generate measurable research results that contribute to NASA’s current and future science and technology goals.

2.4.2. Affiliate Programs
The MSSGC affiliates carry out NASA-relevant programs that include mentoring, lab experiences, pre-service training, tutoring, scholarships, and outreach. The MSSGC Director reviews each affiliate’s program annually to ensure each affiliate is contributing to MSSGC’s objectives and has alignment with the priorities of NASA’s Mission Directorates and Centers.

2.4.3. Statewide Competitively Awarded Activities
These are competitively awarded grants that are required to address one or more research priorities of NASA’s Mission Directorates (i.e. ARMD, HEOMD, SMD, STMD) and/or Centers.

- **Student-Led STEM Activities** can include course-related group projects, workshops, and hands-on student activities. Past programs in this category have included the Space Cowboys high-powered rocketry team, the Rebel Rockets rocketry team, the MSU Robotic Mining Competition team, and High-Altitude Ballooning Exploration teams.

- **Research Initiation Seed Grants** are meant to generate research opportunities with joint faculty/student engagement. Faculty at the four region universities (ASU, DSU, MVSU, MUW) or any of the State’s community colleges or HBCU’s are eligible to apply. The applicants are encouraged to collaborate with faculty at one of the State’s four comprehensive universities (UM, MSU, JSU, USM) to take advantage of existing resources and generate new partnerships. All projects must include undergraduate and/or graduate students.

- **Mini-Grants in STEM Enhancement** projects are aimed at increasing the quality of STEM education in the State. These mini-grant projects are intended to produce a richer STEM experience at the K-12 level with NASA-relevant content. Previous projects have included the Science Teacher Leadership Academy, FirstTech Robotics, and Summer STEM Camp.

2.4.4. Foundations in STEM
The MSSGC Annual Teachers Conference is a partnership between MSSGC and the University of Mississippi Center for Math and Science Education (CMSE). The conference provides 60+ middle school math and science teachers with direct interaction with NASA education specialists, hands-on development of STEM classroom content, and exposure to valuable teaching and career resources.

The MSSGC/UM-CMSE Partnership establishes programs that develop leadership within middle school math and science teachers to train and equip them to be effective in teaching to the Mississippi College and Career Readiness Standards for Science and Math. Most recently, this program formed the Science Teacher Leaders Academy (http://cmse.olemiss.edu/science-teacher-leaders-academy/), a professional development program to establish “leaders across the state who understand and are willing to share research-based practices for implementing core elements such as Science and Engineering Practices and Crosscutting Concepts with other teachers at the school, district, and state level.”
MSSGC Director’s Annual Planning Schedule

Figure 1. MSSGC Director’s Annual Planning Schedule showing the annual cycle of all top-level activities for all program elements and coordination with NASA reporting requirements.
2.5. FUNCTIONAL DESCRIPTION
The Mississippi Space Grant program is operated as a coordinated network. The Director acts to establish objectives and manages the awarding of funds to sub-awardees that carry out an array of activities.

2.5.1. Programmatic Cycle
The overall program runs on an annual basis and is timed to facilitate the coordination of activities that occur on an academic cycle. Typically, all program elements are initiated (solicitation, review, award) during the first half of the calendar year so that funding is in place to support activities for the following academic cycle. Figure 1 provides a pictorial representation of the annual cycle for all MSSGC activities.

The timing is carefully coordinated with the academic calendar and the NASA OSTEM reporting deadlines. This ensures that applicants have adequate time to prepare and submit their proposals or applications, reviewers have adequate time to perform a thorough review, and adequate time is given for award execution. This also ensures that MSSGC can obtain progress reports from awardees in step with NASA reporting requirements. The *Milestones* chart in Section 8 summarizes the activities detailed in Figure 1.

In the Annual Planning Schedule, there is a column for each of the program elements. Another column shows NASA Space Grant meetings and reporting deadlines. For the competitive awards (the first three columns), orange squares represent the release of solicitations, red squares represent the due dates for applications and proposals, and green square represent award announcements (aligns with annual milestones). The goal is to have all the awards announced and processed so that awardees have funds available at the beginning of the academic cycle.

The Foundations in STEM activities are run as a close collaboration between MSSGC and UM CMSE, with staff from both offices located at the U. of Miss. Oxford campus. A planning meeting is held in Oct/Nov of each year to establish project themes and ensure alignment with program objectives.

2.5.2. Solicitation and Selection of Awardees
All MSSGC competitive opportunities are posted on the website, [www.msspacegrant.org](http://www.msspacegrant.org), and announced via email through MSSGC’s affiliate/partner network. The website hosts past solicitations so that potential applicants can understand the elements of the various opportunities and prepare proposals well in advance. When an application window opens, the Director or Assistant Director sends an announcement via email to all MSSGC partners, applicable department chairs, and university officials.

2.5.2.1. Internships
Each year, MSSGC allocates funding for 7 NASA Undergraduate Internships and 2 Industry Internships all at $7,300 for a summer experience.

Students interested in NASA Internships are directed to NASA’s Internships application site. Affiliates are asked to inform the MSSGC main office if Space Grant funded students apply for these so that the Director will know to look for them in the system. In the Spring, the MSSGC Director obtains the list of applicants from NASA and asks for a review/ranking from the MSSGC Affiliate network. The top students are selected for funding based on this review process contingent on suitable placement at a NASA Center.
Students interested in Industry Internships apply directly with MSSGC’s industry partners such as Lockheed at NASA Stennis. Their education coordinator handles recruitment, review, and selection processes.

2.5.2.2. Graduate Fellowships

MSSGC allocates funding for 8 Graduate Fellowships of $22,500 each per year. The most recent solicitation for fellowship applications is available for reference on the MSSGC website:


MSSGC uses InfoReady Review™, an online application submission and review software (https://www.inforeadycorp.com/), to accept applications for the graduate fellowship program: https://olemiss.infoready4.com/. This software allows applicants to complete a pre-formatted application form and upload their application document. The Director then uses InfoReady Review™ to assign the application to reviewers. The reviewers can complete the review process online. The Director reviews the completed reviewer scores and makes a recommendation of selection to MSSGC’s graduate degree granting Affiliates. Upon concurrence, the applicants are notified of selection/rejection, and the InfoReady Review™ system allows the reviewer comments to be provide to the applicants ensuring a transparent selection process.

2.5.2.3. Statewide Competitively Awarded Activities

MSSGC uses the term “Statewide” for the competitively awarded activities because these competitions are run as Statewide open opportunities. The budget provides for 2 x $12,500 Student Led STEM Activities awards, 3 x $15,000 Seed Grants in NASA STEM awards, and 4 x $1,500 STEM Engagement Mini-Grant Activities awards each year of the program. The most recent solicitation for each program is available for reference on the MSSGC website:


Like the Fellowship program, MSSGC uses the InfoReady Review™ system for accepting applications, performing peer review, and sending notifications of selection/rejection to the applicants. The process described for the Fellowships is used for each of these programs also; however, the review criteria are tailored to the specific program outcomes as applicable.

2.5.3. Director Interaction with MSSGC Affiliates

The Affiliate Campus Coordinators act as the steering committee for MSSGC as described in Section 3. Consortium Management. Functionally, the MSSGC Director maintains a close working relationship with each of the Coordinators via regular phone calls and email communications. The Director and Assistant Director make routine trips to visit Affiliate Institutions to maintain a close collegial relationship. The Director hosts two in-person meetings with the Coordinators each year. Coordinators routinely make direct contribution to the selection or review of awardees, review of program outcomes, and suggestion for growth or improvement in the program.

2.5.4. Regarding Draw-Down of Funds

As a regular practice, the lead institution, U. of Mississippi, requires MSSGC to have funds in hand prior to committing program expenses to fellows, scholars, seed-grant awardees, affiliates, etc. For this reason, the 1 June anniversary date for MSSGC’s award is advantageous because it
allows for execution of all subcontracts to affiliates to occur prior to the start of the academic year, thus facilitating timely award of scholarships and other activities. However, it is typical for many of the affiliates to invoice only once at the end of the academic cycle. Additionally, the graduate fellowship and internship funds are not expended until the following April/May. As such, it is typical for our expenditures to peak in the Apr-May timeframe. For this reason, a reconciliation of expenses taken in the first quarter of the calendar year will typically show funds on hand to cover the full consortium’s expenses for the upcoming cycle.

2.5.5. Summary: Allocation of Funds

Figure 2 shows the allocation of MSSGC funds by category including cost-share. MSSGC allocates 73.3% of NASA funds directly to its four program elements with 33.7% dedicated directly to NIFs.

<table>
<thead>
<tr>
<th>Mississippi Space Grant Consortium</th>
<th>NASA Funds</th>
<th>Cost Share</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary of Funds by Category</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Admin Costs</td>
<td>0.6%</td>
<td>23.6%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Total NIFs</td>
<td>33.7%</td>
<td>14.0%</td>
<td>25.5%</td>
</tr>
<tr>
<td>Total SMD Related Programs</td>
<td>6.0%</td>
<td>2.0%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Total Competitive Programs</td>
<td>8.7%</td>
<td>11.4%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Total Affiliate Programs (Subcontracts)</td>
<td>24.9%</td>
<td>35.0%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Total NCAS</td>
<td>3.4%</td>
<td>0.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Total DIRECT Costs</td>
<td>77.4%</td>
<td>86.0%</td>
<td>80.9%</td>
</tr>
<tr>
<td>F&amp;A (Indirects)</td>
<td>22.6%</td>
<td>14.0%</td>
<td>19.1%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$2,915,000</td>
<td>$2,068,700</td>
<td>$4,983,700</td>
</tr>
</tbody>
</table>

Figure 2. Allocation of funds by category as a percentage of the total 4-year cumulative budget (updated to reflect Yr1 Augmentation). The TOTAL includes the proposed NCAS sites in Mississippi.

The F&A (Indirects) account for 22.6% of the NASA funds requested. However, as detailed in the budget tables in Section 5, a large portion of these indirects (approx. 80%) are reinvested into the Administrative, F&A, and Foundations in STEM cost-share budget making up approximately 40% of the cost-share requirements.

Further budget details are given in Section 5 with justification of the various costs.

2.6. ALIGNMENT

2.6.1. Alignment with MSSGC Goals and Objectives

Figure 3 lists the NASA Funds requested for each MSSGC program element and provides a column showing the alignment with MSSGC objectives. This alignment indicates the objectives that each program element will be evaluation upon.
In the case of “2. Affiliate Programs” and “3. Competitive Programs,” each award is unique and subject to a review process. This is obvious for the Competitive Programs. In the case of the Affiliate Programs, the Campus Coordinator annually submits a statement of work to the MSSGC Director for review. In each case, the solicitation requires that the applicant or coordinator specifies alignment with at least 1 MSSGC goal and objective. The review process insures this alignment.

All MSSGC objectives are represented in “1. NIFs” and “4. Foundations in STEM.” This ensures that shifting alignment in the proposed awards/programs does not leave any objective without some means of assessment.

### 2.6.2. Alignment with NASA Space Grant Objectives

MSSGC notes NASA OSTEM’s statement that the OSTEM Performance and Evaluation Strategy is “in alignment with NASA’s 2018 Strategic Plan and in support of the CoSTEM Federal Strategy for 2018-2022.” All of MSSGC’s objectives contribute to the Performance and Evaluation Strategy’s aim to “track progress toward the Agency’s strategic objectives and program goals” by providing assessment criteria and measures for the MSSGC program. Therefore, by extension, all of MSSGC’s objectives also contribute to the Federal Strategy and the NASA 2018 Strategic Plan.

NASA OSTEM identifies seven specific objectives for the Space Grant Program. MSSGC meets each of these objectives in one or more ways. This alignment between NASA OSTEM and MSSGC goals and objectives is summarized in Appendix B.3.

1. **Promote a strong STEM education base from elementary through secondary levels while preparing teachers in these grade levels to become more effective at improving student academic outcomes:** The MSSGC program will …
   - Partner MSSGC Graduate Fellows with a K-12 partner to foster outreach across the educational landscape. (A1, C3)
   - Fund Affiliate programs that support a statewide STEM ecosystem. (A3, D2)
   - Partner with UM CMSE through the Foundations in STEM projects to directly train and equip them to be effective in teaching current STEM Standards. (A7, C2)
   - Conduct a competitive STEM Engagement Mini-Grant program to provide support for the development of enhanced STEM curriculum at the K-12 level. (A6, C2)

2. **Create opportunities that enable student contributions to the development of solutions addressing NASA Mission Directorate challenges:** The MSSGC program will …
• Fund Graduate Fellowships, Internships, Student-Led STEM Teams, and Research Initiation Seed Grants that enforce alignment with NASA challenges through a solicitation/review competitive process. (A1, A2, A4, A5)
• Maintain an Affiliate network that enforce alignment with NASA challenges through an annual Director’s review of performance and priorities. (A3)

3. Establish and maintain a national network of universities with interests and capabilities in aeronautics, space and related fields: The MSSGC program will …
• Establish a statewide network of Affiliates and partners. (A3, A4, A6, A8)
• Fund Research Initiation Seed Grants that require collaboration. (A5)
• Utilize the MSSGC network to apprise program participants of state and national interests and capabilities in aeronautics, space, and related fields. (D1)

4. Create cooperative programs among universities, aerospace industry, and Federal, state, and local governments to foster STEM ecosystems: The MSSGC program will …
• Fund Research Initiation Seed Grants that require collaboration. (A5)
• Support Foundations in STEM programs that enhance the STEM ecosystem in Mississippi. (A7)

5. Encourage interdisciplinary training, research, and public service programs related to aerospace: The MSSGC program will …
• Partner MSSGC Graduate Fellows with a K-12 partner to encourage interdisciplinary training and public service across the educational landscape. (A1)
• Fund interdisciplinary Student-Led STEM Teams that bring students from various backgrounds together for training and research. (A4, C1)
• Utilize Foundations in STEM activities to expose educators to research and training in an array of STEM fields. (C2)

6. Attract, recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities, for careers in aerospace science and technology: The MSSGC program will …
• Fund Graduate Fellowships, Internships, Student-Led STEM Teams, and Research Initiation Seed that utilize unbiased recruitment/review strategies to maintain diversity targets. MSSGC sets diversity targets based on MS percentages referenced in Table 306.60 from the National Center for Education Statistics (NCES), currently at 43.5%. MSSGC will target a diversity goal of 42% and female goal of 60% for all direct awards. (A1, A2, A4, A5, A8, B1, B2, B3, B4, B5, C1, C3)

7. Advance aerospace knowledge and expand related activities: The MSSGC program will …
• Fund Graduate Fellowships, Internships, Research Initiation Seed Grants, STEM Engagement Mini-Grants, and Foundations in STEM activities that support faculty, staff, and student involvement in advancing the state-of-the-art in aerospace knowledge. (A1, A2, A5, A6, A7, A8, B1, B2, B3, C3, D1, D2)

---

2.6.3. Alignment with NASA Mission Directorate Needs and Priorities

2.6.3.1. Science Mission Directorate (SMD)

The Foundations in STEM activities most closely align with Science Mission Directorate (SMD) needs and priorities. Specifically, the MSSGC Annual Teachers Conference and the UM-CMSE Partnership align with the SMD’s vision to “share the journey of scientific exploration with the public and partner with others to substantially improve science, technology, engineering and mathematics (STEM) education nationwide.” Depending on the educational content in these programs, it is common to find overlap with the needs and priorities of other directorates and centers. For example, MSSGC typically hosts several education outreach specialists from NASA Stennis who share NASA content and interests with the participants at the MSSGC Annual Teacher Conference.

2.6.3.2. Competitively Awarded Activities

The NIFs, Affiliate Programs, and Competitively Awarded Activities all involve a proposal and review prior to award or execution. For the NIFs, the students must apply either to the NASA Internship program, the MSSGC Graduate Fellowship program, or the MSSGC Industry Internship program. The Affiliates annually submit a proposed statement of work that is reviewed along with their year-end reports. For Student-Led STEM, Research Initiation Grants, and Mini-Grants in STEM Enhancement, the applicants must apply to the MSSGC and have their proposals reviewed. In each case, the applicants are made aware of a requirement to establish and describe alignment with a NASA Mission Directorate need or priority, and the reviewers are made aware of this requirement and asked to score the application accordingly as one of the review criteria. This application/review cycle ensures that all of the awardees fulfill alignment with at least one NASA Mission Directorate need or priority.
3. Consortium Management

Management of the MSSGC is comprised of a Director, an Assistant Director, and a steering committee made of the Affiliate Campus Coordinators. The Director reports to the Mississippi Research Consortium (MRC),\(^4\) which is comprised of the Chief Research Officers from Mississippi’s four comprehensive universities. The University of Mississippi is the lead institution and fiscal agent. The Director sets overall goals and objectives in accordance with NASA priorities and Mississippi STEM and economic development interests. The Director manages a portfolio of statewide competitive programs. The Affiliate Campus Coordinators are responsible for the day-to-day management of affiliate programs. The personnel at both levels work closely to accomplish the necessary administrative processes to keep MSSGC running effectively. Affiliate programs focus on the particular geographic region in the vicinity of the performing affiliate.

3.1.1. MSSGC Central Office

All of MSSGC’s competitive program elements are coordinated out of the central office by the MSSGC Director. This includes (1) internships & fellowships; (2) affiliate programs; (3) competitively awarded activities; and (4) foundations in STEM. The majority of NASA funds are allocated to these statewide components, which are competitively awarded to students/faculty throughout the consortia and available to all Mississippi public and private institutions of higher learning.

The Central Office oversees the distribution and management of space grant funds to all awardees and is responsible for the numerous proposal and reporting responsibilities as required by NASA.

3.1.2. MSSGC Affiliates

The MSSGC has eighteen affiliate institutions: the State’s four comprehensive and four regional universities, and ten MS community colleges. Five of its affiliates are Historically Black Colleges and Universities (HBCUs), and one is an institution serving primarily women.

A Campus Coordinators is designated at each Affiliate and is responsible for organizing and managing Space Grant programs on his/her campus. Affiliate programs focus on the particular geographic region in the vicinity of the performing affiliate. Affiliate Campus Coordinators present a statement of work and a budget signed by their fiscal agent to the MSSGC Central Office. The Director reviews each proposed program and budget annually and must approve it before the subcontract is processed. The personnel at both levels work closely to accomplish the necessary administrative processes to keep MSSGC running effectively.

3.1.3. Coordination

The MSSGC Director hosts two coordination meetings each year. A summer coordinators workshop was established to provide the affiliate coordinators with hands-on training in NASA Priorities, budgeting and programmatic logistics, inclusivity/diversity, and reporting on MSSGC SMART objectives. A January meeting is held each year to enable affiliate coordinators to present progress reports and deliver data on their programs to the Director. Other teleconferences are held on an as-needed basis.

\(^4\) [http://www.mississippiresearch.org/](http://www.mississippiresearch.org/)
4. Budget Summary

4.1. SUMMARY
The following table shows the top-level summary of the distribution of NASA funds by year and program element (according to descriptions in Section 2.4). The totals match the funding level limits set by NASA for each year.

<table>
<thead>
<tr>
<th>NASA Funds Requested by Program Element</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Admin. + Indirects</td>
<td>$187,339</td>
<td>$163,709</td>
<td>$163,709</td>
<td>$163,709</td>
<td>$678,466</td>
</tr>
<tr>
<td>1. NIFs</td>
<td>$245,700</td>
<td>$245,700</td>
<td>$245,700</td>
<td>$245,700</td>
<td>$982,800</td>
</tr>
<tr>
<td>2. Affiliate Programs</td>
<td>$215,000</td>
<td>$170,000</td>
<td>$170,000</td>
<td>$170,000</td>
<td>$725,000</td>
</tr>
<tr>
<td>3. Competitive Programs</td>
<td>$72,000</td>
<td>$61,000</td>
<td>$61,000</td>
<td>$61,000</td>
<td>$255,000</td>
</tr>
<tr>
<td>NCAS</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$785,000</td>
<td>$710,000</td>
<td>$710,000</td>
<td>$710,000</td>
<td>$2,915,000</td>
</tr>
</tbody>
</table>

The total funds can be broken down into percentages for each category as shown here and in the associated graphic. NIFs are by far the largest investment (33.7%).

<table>
<thead>
<tr>
<th>Mississippi Space Grant Consortium Summary of Funds by Category</th>
<th>NASA Funds</th>
<th>Cost Share</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Admin Costs</td>
<td>0.6%</td>
<td>23.6%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Total NIFs</td>
<td>33.7%</td>
<td>14.0%</td>
<td>25.5%</td>
</tr>
<tr>
<td>Total SMD Related Programs</td>
<td>6.0%</td>
<td>2.0%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Total Competitive Programs</td>
<td>8.7%</td>
<td>11.4%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Total Affiliate Programs (Subcontracts)</td>
<td>24.9%</td>
<td>35.0%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Total NCAS</td>
<td>3.4%</td>
<td>0.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Total DIRECT Costs</td>
<td>77.4%</td>
<td>86.0%</td>
<td>80.9%</td>
</tr>
<tr>
<td>F&amp;A (Indirects)</td>
<td>22.6%</td>
<td>14.0%</td>
<td>19.1%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$2,915,000</td>
<td>$2,068,700</td>
<td>$4,983,700</td>
</tr>
</tbody>
</table>

The F&A (Indirects) accounts for 22.6% of the NASA funds requested. However, as detailed in the budget tables in Section 5.2, a large portion of these indirects (approx. 80%) are reinvested into the Administrative, F&A, and Foundations in STEM cost-share budget making up approximately 40% of the cost-share requirements.
4.2. PROGRAMMATIC SUMMARY

4.2.1. Summary of NASA Internship and Fellowship (NIF) Investments

MSSGC has three components to the NIFs investments as discussed in Section 2.4.1. Internships include both NASA and Industry internships for undergraduates and make up 26.7% of the NIFs investments. Graduate Fellowships account for 73.3% of NIFs, which is consistent with the intent of the National Space Grant College and Fellowship Program.

<table>
<thead>
<tr>
<th>Summary of NIFs Investments</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Overall</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. NASA Internships</td>
<td>$ 51,100</td>
<td>$ 51,100</td>
<td>$ 51,100</td>
<td>$ 51,100</td>
<td>$ 204,400</td>
<td>20.8%</td>
</tr>
<tr>
<td>2. Graduate Fellowships</td>
<td>$ 180,000</td>
<td>$ 180,000</td>
<td>$ 180,000</td>
<td>$ 180,000</td>
<td>$ 720,000</td>
<td>73.3%</td>
</tr>
<tr>
<td>3. MSSGC Industry Internships</td>
<td>$ 14,600</td>
<td>$ 14,600</td>
<td>$ 14,600</td>
<td>$ 14,600</td>
<td>$ 58,400</td>
<td>5.9%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$ 245,700</td>
<td>$ 245,700</td>
<td>$ 245,700</td>
<td>$ 245,700</td>
<td>$ 982,800</td>
<td></td>
</tr>
</tbody>
</table>

4.2.2. Statewide Programs

The statewide programs include NIFs, Directorate Projects, and Competitive Projects that are administered by the central office.

Internships: While the internships are open to undergraduate and graduate students, the internships are typically awarded to undergraduate students. Therefore, the budget allocates the 10-week undergraduate funding level ($7,300) for all MSSGC internships in accordance with the standardized levels within NASA’s Office of Education. The funds support a total of 9 internships (7 – NASA; 2 – Industry) for each year of the program.

Fellowships: The funding level for fellowships is $22,500 each. The funds support a total of 8 fellowships per year.

For budget purposes, we assume $76,000 as the total cost-sharing per year based on historical trends. To ensure this cost-share is met, MSSGC will implement a policy that requires at least 1:2 matching from the student’s university or home department in order to receive the fellowship award.

Directorate Projects: Two activities under Foundations in STEM are identified with the Science Mission Directorate: 1. Annual Teacher Conference, 2. UM CMSE Partnership.

A total of $134,636 ($93,638 NASA; $40,998 cost share) is allocated to fund the MSSGC Annual Teacher Conference. The exact amount for this conference fluctuates year-to-year due to hotel/conference center fees and other related costs. The program is designed to support at least 65 attendees with site fees, a $75 stipend, and continuing education units (CEUs). The budget allocation is based on historical trends for this conference ($34,720 – 2016; $31,214 – 2017; ice storm cancelled 2018; $40,585 – 2019).

$20,000 annually is allocated to the UM CMSE partnership. These funds support pilot projects that target leadership development in K-12 math and science education. The funds are typically
used to run a summer workshop. As CMSE is a unit within the University of Mississippi, a subcontract is not required.

**Competitive Projects:** A total of $76,000 (Year 1) is allocated to support three competitively awarded projects. In Year 2-4 this decreases to $61,000.

$25,000 supports two awards of $12,500 each for Student-Let STEM Activities. A 1:1 cost share is required of the applicant.

Research Initiation Seed Grants are $15,000 each, and a 1:1 cost share is required of the applicant. In Year 1 we will fund 3 awards. In Year 2-4 we will fund 2 awards.

$6,000 supports four awards of $1,500 each for STEM Engagement Mini-Grants. No cost share is required for these small awards.

Prior solicitations for each of these programs is available on the MS Space Grant website:

- [http://msspacegrant.org/docs/SG_HE_StudentPrograms_Solicitation_2019.pdf](http://msspacegrant.org/docs/SG_HE_StudentPrograms_Solicitation_2019.pdf)

### 4.2.3. Affiliate Programs

The 18 affiliates are divided into three tiers: (I) the four comprehensive universities (UM, MSU, JSU, USM), (II) the four regional universities (MUW, MVSU, DSU, ASU), and (III) the ten community colleges (CCC, HCC, ICC, MCC, MDCC, MGCCC, NEMCC, PRCC, JCJC, SMCC). Each affiliate receives annual funds at a level dependent on the tier. Tier I receives $20,000, Tier II receives $10,000, and Tier III receives $5,000. The Year 1 Augmentation allows Tier II and Tier III to receive $15,000 and $7,500, respectively for Year 1.

The Affiliates are an integral part of the MS Space Grant Consortium. The Affiliate Campus Coordinators serve is the steering committee for the consortium.

The particular statement of work for each Affiliate can shift year-to-year based on need and alignment with NASA challenges. Therefore, the Campus Coordinator submits a statement of work and a budget signed by their fiscal agent to the MSSGC Central Office each Spring. The Director reviews each proposed program and budget to ensure alignment with NASA and MSSGC goals/objectives and must approve it before the subcontract is processed. Therefore, there is not a set statement of work that can be attached to each Affiliate for the duration of the 4-year program.

Each affiliate pledges 1:1 cost sharing in support of the Space Grant program and in sharing the cost share burden with the lead institution. To indicate this pledge, *Letters of Resource Support* are presented for each Affiliate in Section 7. Note that the *Letters* were requested prior to the final budget adjustments. As such, the pledges actually exceed the required cost share noted in the detailed budget. Since the pledge meets the required 1:1 cost share, MSSGC did not request revisions of the *Letters* by the Affiliates.

The lead institution, U. of Mississippi, also acts as one of the Affiliates. The associated Affiliate funds are used to perform MS Space Grant activities on site under the direction of Dr. Ryan Fortenberry (see Affiliate Concurrences for contact information). As these funds remain with the lead institution, the AOR’s signature on the cover sheet act as certification of the funding allocations and related cost-share levels for the UM Affiliate activities.
The funds are distributed to the Affiliates by executing subcontracts each year (mid-May). The indirect F/A costs of 46% are applied to each subcontract. The F/A rate is in accordance with current University of Mississippi rates as published (http://www.research.olemiss.edu/proposal-development/current-rates).
5. Letters of Resource Support

*Letters of Resource Support* are attached on the following pages from all of the Affiliate Institutions that received subcontracts from the University of Mississippi.

The lead institution, U. of Mississippi, also acts as one of the Affiliates. The associated Affiliate funds are used to perform MS Space Grant activities on site under the direction of Dr. Ryan Fortenberry (see Affiliate Concurrences for contact information). As these funds remain with the lead institution, the AOR’s signature on the cover sheet act as certification of the funding allocations and related cost-share levels for the UM Affiliate activities. Therefore, a *Letter of Resource Support* is not expressly provided for the on-site Affiliate activities.

See Section 6 for contact information for all Affiliate Campus Coordinators.

*The remainder of this page intentionally left blank.*
August 30, 2019

Nathan E. Murray, Ph.D.
Director, Mississippi NASA Space Grant Consortium
The University of Mississippi
145 Hill Drive
P.O. Box 1848
University, MS 38677-1848
U.S.A.

Dear Dr. Murray:

Alcorn State University is excited to be an affiliate of the NASA Space Grant Consortium in Mississippi. Dr. Thomas J. Ondra will serve as the local coordinator and will manage the $10,000 of annual resource support in accordance with the goals and objectives of NASA Space Grant Consortium and NASA’s Office of STEM Engagement. Alcorn State University is committed to supporting learning opportunities that inspire, engage, educate, and empower the next generation of explorers through NASA-unique STEM learning opportunities. The $10,000 of annual resource support will be used to provide scholarships and stipends to students who are engaged in STEM programs.

As an affiliate member, Alcorn State University, is committed to providing at least $10,000 of in-kind cost-matching through non-federal sources on an annual basis.

Respectfully,

[Signature]

Date: 9/6/19

John Igwebuike, J.D., Ph.D.
Interim Provost and Executive Vice President
Academic Affairs

Office of the Provost and Executive Vice President for Academic Affairs | 1000 ASU Drive #569 | Lorman, MS 39096-7500
Phone: 601.877.6140 | Fax: 601.877.6256 | www.alcorn.edu
September 11, 2019

Dr. Nathan E. Murray, Ph.D.
The University of Mississippi
145 Hill Drive
P.O. Box #1848
University, MS 38677-1848

Dear Dr. Murray:

Coahoma Community College is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Dr. Richard Cosby will serve as the local coordinator and will manage the amount $5,000.00 of Space Grant funds according to affiliate group of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Coahoma Community College is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $5,000.00 on an annual basis.

Best Regards,

[Signature]

Valmaedge T. Towner
President

/ycm
8/16/2019

Dear Dr. Murray:

Delta State University is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Dr. Chuck Smithhart will serve as the local coordinator and will manage the $15,000 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Delta State University is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $15,000 on an annual basis.

Best,

Heather Kovarcik Miller
Director, Institutional Grants
September 4, 2019

Dear Dr. Murray

Hinds Community College-Utica Campus is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Jonathan Townes, Assistant Director of Sponsored Grants, will serve as the local coordinator and will manage the $7,500 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement.

As an affiliate member, Hinds Community College-Utica Campus is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $7,500 on an annual basis.

If additional information is needed, please contact us.

Sincerely

Dr. Clyde Muse, President
Hinds Community College
August 13, 2019

Dr. Nathan Murray  
Director, Mississippi NASA Space Grant Consortium  
The University of Mississippi  
P.O. Box 1848  
University, MS 38677

Dear Dr. Murray:

Itawamba Community College is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Dr. Jada Mills will serve as the local coordinator and will manage the $7,500.00 annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Itawamba Community College is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $7,500.00 on an annual basis.

Sincerely,

[Signature]

J. Michelle Sumter, Ph.D.  
Vice President of Instructional Services
August 29, 2019

Dear Dr. Murray:

Jones College is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Eric Shows will serve as the local coordinator and will manage the $7500 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Jones College is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $7500 on an annual basis.

Sincerely,

DL Youngblood
Chief Financial Officer
Chief Academic Officer
6 September 2019

Dr. Nathan Murray
Director, Mississippi NASA Space Grant Consortium
The University of Mississippi
145 Hill Drive
P.O. Box 1848
University, MS 38677-1848

Dear Dr. Murray:

Jackson State University is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Dr. Maria Begonia will serve as the local coordinator and will manage the $20,000 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Jackson State University is committed to providing cost matching through non-federal sources (cash or in-kind) of at least $20,000 on an annual basis.

Sincerely,

Joseph A. Whittaker, Ph.D.
Vice President for Research and Economic Development/
Associate Provost
July 30, 2019

Nathan E. Murray, Ph.D.
Director, Mississippi NASA Space Grant Consortium
The University of Mississippi
145 Hill Drive
P.O. Box 1848
University, MS 38677-1848

Dear Dr. Murray:

Meridian Community College is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Dr. Angela Carraway will serve as the local coordinator and will manage the $7,500 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Meridian Community College is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $7,500 on an annual basis.

Sincerely,

Thomas M. Huebner, Jr., Ph.D.
President
Nathan E. Murray, Ph.D.
Director, Mississippi NASA Space Grant Consortium
The University of Mississippi
145 Hill Drive
P.O. Box 1848
University, MS 38677-1848

Re: Letter of Support

Dear Dr. Murray:

Thank you for your time and attention to this matter. Mississippi Delta Community College is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Amy Biles will serve as the local coordinator and will manage the $7500 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Mississippi Delta Community College is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $7500 on an annual basis.

Should you have any questions or concerns, please do not hesitate to contact my office and we will assist.

Sincerely,

Steven J. Jones
Vice President

cc: Dr. Tyrone Jackson, President
Mrs. Teresa Webster, Vice President of Instruction
Mrs. Debbie Gantz, Math and Science Division Chair
Mrs. Amy Biles, MDCC Local Coordinator/Chemistry and Physical Science Instructor
July 31, 2019

Nathan Murray, PhD
Mississippi NASA Space Grant Consortium
The University of Mississippi
145 Hill Drive
P. O. Box 1848
University, MS 38677-1848

Subject: Letter of Resource Support

Dear Dr. Murray:

Mississippi State University is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Dr. Adrian Sescu will serve as the local coordinator and will manage the $30k of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA's Office of STEM Engagement. As an affiliate member, Mississippi State University is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $30k on an annual basis.

Regards,

[Signature]

Dr. Julie Jordan
Interim Vice President of Research and Economic Development
Mississippi State University
September 6, 2019

Nathan E. Murray, Ph.D.
Director, MS NASA Space Grant Consortium
The University of MS
145 Hill Drive/POB 1848
University, MS 36677-1848

Dear Dr. Murray:

Mississippi Gulf Coast Community College is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Kimberly Brown will serve as the local coordinator and will manage the $5,000 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA's Office of STEM Engagement. As an affiliate, Mississippi Gulf Coast Community College is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $5,000 on an annual basis.

Sincerely,

Louise Brown
Coordinator of Grants & Special Projects
POB 609
Perkinston, MS 39573
louise.brown@mgccc.edu
August 30, 2019

Dear Dr. Murray:

Mississippi University for Women is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Dr. Ross Whitwam will serve as the local coordinator and will manage the $15,000 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Mississippi University for Women is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $11,983 on an annual basis.

Sincerely,

Mark Ellis  
Vice President for Administration &  
Chief Financial Officer

Scott Tollison, Ph.D.  
Provost & Vice President for Academic Affairs

8/29/19  
8/29/19
July 31, 2019

Nathan E. Murray, Ph.D.
Director, Mississippi NASA Space Grant Consortium
The University of Mississippi
145 Hill Drive
P.O. Box 1848
University, MS 38677-1848

Dear Dr. Murray:

Mississippi Valley State University is excited to be an affiliate of the Mississippi NASA Space Grant Consortium. Dr. Raymond Williams will serve as the local coordinator and will manage the $15,000 of annual resource support in accordance with the goals and objectives of the NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Mississippi Valley State University is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $15,000 on an annual basis.

Sincerely,

Elizabeth D. Evans, Ph.D.
Interim Vice President for Academic Affairs
August 1, 2019

Dr. Nathan Murray  
Director, Mississippi Space Grant Consortium  
PO Box 1848, 103 Brevard Hall  
University of Mississippi  
University, MS  38677

Dear Dr. Murray:

The Northeast Mississippi Community College is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Beth Byrd will serve as the local coordinator and will manage the $7,500.00 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA's Office of STEM Engagement. As an affiliate member, Northeast Mississippi Community College is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $7,500.00 on an annual basis.

Sincerely,

Michelle Baragona, Vice President of Instruction  
101 Cunningham Blvd  
217 Ramsey Hall, 662-720-7375

Michelle Baragona, Vice President of Instruction
Dear Dr. Murray:

Pearl River Community College is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Amanda Lawler will serve as the local coordinator and will manage the $7500.00 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Pearl River Community College is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $7500.00 on an annual basis.

Sincerely,

[Signature]

Roger Knight, Vice President of College Operations
September 24, 2019

Dear Dr. Murray:

Southwest Mississippi Community College is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Dr. James Stephens will serve as the local coordinator and will manage the $7500.00 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, Southwest Mississippi Community College is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $7500.00 on an annual basis.

We appreciate the opportunity participation in this grant will provide for our college, especially our students, and are excited that Dr. Stephens is willing to participate.

Sincerely,

Alicia C. Shows, Vice-President for Instruction

September 24, 2019
August 19, 2019

Nathan E. Murray, Ph.D.
The University of Mississippi
145 Hill Drive
P.O. Box #1848
University, MS 38677-1848

Dear Dr. Murray:

The University of Southern Mississippi is excited to be an affiliate of the NASA Space Grant in Mississippi Consortium. Dr. David M. Cochran will serve as the local coordinator and will manage the $30,000 of annual resource support in accordance with the goals and objectives of NASA Space Grant in Mississippi and NASA’s Office of STEM Engagement. As an affiliate member, The University of Southern Mississippi is committed to providing cost-matching through non-federal sources (cash or in-kind) of at least $30,000 on an annual basis.

Sincerely,

Steven R. Moser, Ph.D.
Provost and Senior Vice President for Academic Affairs

cc: Gordon C. Cannon, Vice President for Research
    Chris Winstead, Dean, College of Arts and Sciences
    David M. Cochran, Professor, School of Biological, Environmental, and Earth Sciences
6. Milestones

MSSGC runs its programmatic elements on four main cycles as described in Section 2.5 and illustrated in Figure 2. This is summarized here as a table of milestones (Figure 9).

<table>
<thead>
<tr>
<th>Activity</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEP</th>
<th>OCT</th>
<th>NOV</th>
<th>DEC</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Award Graduate Fellowships</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>2. Award Internships</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>3. Execute Affiliate Sub-Awards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>4. Award Student-Led STEM Projects</td>
<td>=&gt;</td>
<td>and</td>
<td>Select</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>5. Award Research Initiation Seed Grants</td>
<td>=&gt;</td>
<td>and</td>
<td>Select</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>6. Award Mini-Grants in STEM Enhancement</td>
<td>=&gt;</td>
<td>and</td>
<td>Select</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>7. Hold Annual Teachers Conference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planning =&gt;</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Conduct MSSGC/CMSE Partnership Activity</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Figure 4. Chart of annual MSSGC milestones. The same milestones are applicable year on year.

This milestone chart is applicable to each year of the program. The award start date for MSSGC is 1 June, which corresponds to the first month shown on the chart.

The critical timing of the Fellowships cycle is the award of fellowships prior to the end of the academic year so that students can plan financial aid for the following academic year. This also provides a suitable solicitation and review cycle during the academic year.

The Internship cycle follows the Fellowship cycle. This is advantageous because NASA requires that internship funding be set by at least April for the Summer internships. Historically, MSSGC has primarily funding Summer internships.

The critical timing for Affiliates Programs is the award of sub-contracts in advance of the start of the academic cycle. To facilitate this, MSSGC works to have all Affiliates’ sub-awards executed by the end of May so that Summer holiday schedules do not cause funding delays at the beginning of the following academic year. MSSGC holds the Annual Teacher Conference annually in January, and this acts as a suitable time to hold mid-year reviews with the Affiliates and plan for following year priorities.

The MSSGC/CMSE Partnership activity is typically a summer workshop with either a math or science focus (see Section 2.4.4). The planning for this starts well in advance so that the activity can be carried out immediately after funding is received from NASA.
Appendix A. Project Assessment

MSSGC’s objectives are described in detail in Section 2.3. Each objective has a specific target and timeframe. These targets and deadlines are summarized in Section B.3. Summarized Table of S.M.A.R.T. Goals and Objectives.

A.1. PROJECT EVALUATION
MSSGC adopts an annual approach to program evaluation to allow for tracking and consortia feedback to implement continual improvements thereby sustaining an impactful program that can support students throughout their academic career while providing new opportunities to a growing STEM interest within the state.

Data is collected for awardees as awards are made during the year. Surveys are collected from participants as projects and activities are completed. And, a persistent longitudinal tracking service assesses the matriculation of program participants and awardees moving into advanced degrees and jobs in STEM fields.

The Director meets with the consortium members twice annually to review evaluation of MSSGC objectives. These meetings allow for program changes to be implemented as necessary to address growth opportunities or problem areas identified by the evaluation results.

A.2. DATA COLLECTION PLAN
Program participant information is obtained through student data tables, participant surveys and longitudinal tracking of awardees.

A.2.1. Student Data Tables
Student data is requested by the Asst. Director from the Coordinators, Faculty/Staff Awardees, or directly from the Student Awardees. The Asst. Director is responsible for compiling all awardee information as needed for reporting purposes. The Director reviews the completed reports and has access to the data tables. This information may include name, birth date, studentID, academic level, GPA, race, gender, citizen y/n, disabled y/n, military y/n, award amount, award start date, award end date, major, minor, anticipated graduation date, phone, email, address, education goal, highest degree attained, and work goal.

A.2.2. Participant Surveys
Participant surveys are used for activities such as workshops, tutoring labs, training activities, etc. Surveys are collected from participants as projects and activities are completed. The surveys are tailored to the specific program objectives as applicable. As an example, the following survey questions were used for the 2019 Annual Teacher Conference.

<table>
<thead>
<tr>
<th>Number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Good job. Thank you!</td>
</tr>
<tr>
<td>13</td>
<td>The material in the binder is AWESOME. This is the best/most useful conference I have attended. The only recommendation/suggestion I can offer is the intensity of the conference—back to back sessions (even during meals) with no break (my brain was full). Having a physics session for the last session was so difficult. Physics is a tough subject and having that at the end of the long day was a little strenuous and difficult to digest. Overall, the conference was great and I hope to attend next year.</td>
</tr>
<tr>
<td>15</td>
<td>I loved how Dr. James catered to all grade levels. She is awesome! More presenters like her.</td>
</tr>
<tr>
<td>19</td>
<td>Great workshops.</td>
</tr>
<tr>
<td>26</td>
<td>Too much sitting; need more hands-on.</td>
</tr>
<tr>
<td>33</td>
<td>Not as informative as previous conference.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>The material presented in the session(s) will make me a more effective math/science teacher.</td>
</tr>
<tr>
<td>47</td>
<td>The material presented in this program has increased my awareness of current math or science issues.</td>
</tr>
<tr>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td></td>
</tr>
</tbody>
</table>

Please mark agree or disagree for the following statements regarding the MSSGC Annual Teacher Conference.
A.2.3. Longitudinal Tracking

MSSGC utilizes the Education Program Support Services of Mr. Mark Fischer to perform student tracking. EPSS includes automation and direct human interaction to maintain contact with program participants, and EPSS keeps MSSGC appraised of NASA’s reporting requires so that compliance is ensured. Historically, we have been successful in determining 82% of our participant’s next-step and 81% of these goes onto STEM disciplines.

A.3. EVALUATION OF THE OBJECTIVES

- Objectives A1 through A7 are counted based on the initiation of grants/awards and counting of participants at events.
- Objective A8 is calculated based on the year-end total number of direct participants in all MSSGC activities.
- Objectives B1, B2 & B3 are evaluated through longitudinal tracking (Education Program Support Services, Mr. Mark Fischer) of program participants.
- Objective B4 & B5 are evaluated through awardee demographic data obtained voluntarily from the awardees.
- Objective C1, C2, C3, D1 & D2 are evaluated through participant surveys. Affiliates and awardees of the competitive grants/programs are required to conduct these surveys as appropriate based on the alignment of their projects with MSSGC objectives. Awardees provide survey-based results to MSSGC through progress and final reports.

A.4. COMPILING AND REPORTING RESULTS

The Assistant Director is responsible for aggregating all program evaluation data and preparing reports as required by NASA OSTEM. This is reflective of the 100% FTE time allocation of the Asst. Director to the MSSGC program.
<table>
<thead>
<tr>
<th>Strategic Priority Alignment</th>
<th>Space Grant Objective Alignment</th>
<th>Goal</th>
<th>Objective</th>
<th>Metrics</th>
<th>Target</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3</td>
<td>1,2,5,6,7</td>
<td>A. Engage</td>
<td>A1. Fellowships</td>
<td>total # of graduate fellows funded</td>
<td>8</td>
<td>4/30/21</td>
</tr>
<tr>
<td>1,2,3</td>
<td>2,6,7</td>
<td>A2. Internships</td>
<td>total # of undergraduate internships funded</td>
<td>9</td>
<td>4/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>1,2,3</td>
<td>A3. Affiliates</td>
<td># of affiliate institutions active as members of the MSSGC network</td>
<td>16</td>
<td>5/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>2,3,5,6</td>
<td>A4. Student-Led STEM</td>
<td>total # of student-led STEM teams funded</td>
<td>2</td>
<td>8/30/20</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>2,3,4,6,7</td>
<td>A5. Seed Grants</td>
<td>total # of NASA STEM Seed Grants awarded</td>
<td>2</td>
<td>8/30/20</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>3,7</td>
<td>A6. STEM Engagement</td>
<td>total # of mini-grant STEM enhancement awards granted</td>
<td>2</td>
<td>8/30/20</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>1,4,7</td>
<td>A7. Foundations</td>
<td>total # of participants in STEM training activities</td>
<td>50</td>
<td>1/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>3,6,7</td>
<td>A8. Reach</td>
<td># of direct participants per $1000 of NASA direct funds</td>
<td>0.596</td>
<td>5/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B. Empower</td>
<td>B1. Obtain a Degree</td>
<td>Successfully identify next step after graduation</td>
<td>80%</td>
<td>5/30/21</td>
</tr>
<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B2. Remain in STEM Disciplines</td>
<td>Remain in STEM after graduation</td>
<td>75%</td>
<td>5/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B3. Pursue Advanced Degrees</td>
<td>Exceed general population by % the # of individuals pursuing advanced degrees</td>
<td>40%</td>
<td>5/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B4. Diversity, Women</td>
<td>% of direct awards to women (meet or exceed DoE NCES data)</td>
<td>60%</td>
<td>5/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B5. Diversity, Under-represented</td>
<td>% of direct awards to under-represented groups (meet or exceed DoE NCES data)</td>
<td>42%</td>
<td>5/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>5,6</td>
<td>C. Enhance</td>
<td>C1. Authentic Experiences</td>
<td>% of students agree with &quot;gained useful skills and experience.&quot;</td>
<td>75%</td>
<td>5/30/21</td>
</tr>
<tr>
<td>1,2,3</td>
<td>1,5</td>
<td>C2. Effectiveness</td>
<td>% of teachers agree with &quot;make me more effective.&quot;</td>
<td>75%</td>
<td>5/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>1,6,7</td>
<td>C3. Inspire Future Generations</td>
<td>% of teachers report students more &quot;inspired to pursue further STEM study.&quot;</td>
<td>80%</td>
<td>5/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>3,7</td>
<td>C4. Increase Awareness</td>
<td>% of participants agree with &quot;increased my awareness.&quot;</td>
<td>75%</td>
<td>5/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>1,3,7</td>
<td>D. Enlighten</td>
<td>D1. Increase Awareness</td>
<td>% of participants agree with &quot;kept aware of relevant NASA opportunities.&quot;</td>
<td>80%</td>
<td>5/30/21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Priority Alignment</th>
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<td>1,2,3</td>
<td>1,2,5,6,7</td>
<td>A. Engage</td>
<td>A1. Fellowships</td>
<td>total # of graduate fellows funded</td>
<td>16</td>
<td>4/30/22</td>
</tr>
<tr>
<td>1,2,3</td>
<td>2,6,7</td>
<td>A2. Internships</td>
<td>total # of undergraduate internships funded</td>
<td>18</td>
<td>4/30/22</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>1,2,3</td>
<td>A3. Affiliates</td>
<td># of affiliate institutions active as members of the MSSGC network</td>
<td>16</td>
<td>5/30/22</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>2,3,5,6</td>
<td>A4. Student-Led STEM</td>
<td>total # of student-led STEM teams funded</td>
<td>4</td>
<td>8/30/21</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>2,3,4,6,7</td>
<td>A5. Seed Grants</td>
<td>total # of NASA STEM Seed Grants awarded</td>
<td>4</td>
<td>8/30/21</td>
<td></td>
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<td>8/30/21</td>
<td></td>
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<td>1,4,7</td>
<td>A7. Foundations</td>
<td>total # of participants in STEM training activities</td>
<td>100</td>
<td>1/30/22</td>
<td></td>
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<td>1,3,7</td>
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</tbody>
</table>
### Strategic Priorities

<table>
<thead>
<tr>
<th>Strategic Priority Alignment</th>
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<td>1,2,5,6,7</td>
<td>A. Engage</td>
<td>A1. Fellowships</td>
<td>total # of graduate fellows funded</td>
<td>24</td>
<td>4/30/23</td>
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<tr>
<td>1,2,3</td>
<td>2,6,7</td>
<td>A2. Internships</td>
<td>total # of undergraduate internships funded</td>
<td>27</td>
<td>4/30/23</td>
<td></td>
</tr>
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<td>2,3,5,6</td>
<td>A4. Student-Led STEM</td>
<td>total # of student-led STEM teams funded</td>
<td>6</td>
<td>8/30/22</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>2,3,4,6,7</td>
<td>A5. Seed Grants</td>
<td>total # of NASA STEM Seed Grants awarded</td>
<td>6</td>
<td>8/30/22</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>3,7</td>
<td>A6. STEM Engagement</td>
<td>total # of mini-grant STEM enhancement awards granted</td>
<td>6</td>
<td>8/30/22</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>1,4,7</td>
<td>A7. Foundations</td>
<td>total # of participants in STEM training activities</td>
<td>150</td>
<td>1/30/23</td>
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</tr>
<tr>
<td>1,2,3</td>
<td>3,6,7</td>
<td>A8. Reach</td>
<td># of direct participants per $1000 of NASA direct funds</td>
<td>0.596</td>
<td>5/30/23</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B. Empower</td>
<td>B1. Obtain a Degree</td>
<td>Successfully identify next step after graduation.</td>
<td>80%</td>
<td>5/30/23</td>
</tr>
<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B2. Remain in STEM disciplines</td>
<td>Remain in STEM after graduation.</td>
<td>75%</td>
<td>5/30/23</td>
<td></td>
</tr>
<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B3. Pursue Advanced Degrees</td>
<td>Exceed general population by % the # of individuals pursuing advanced degrees.</td>
<td>40%</td>
<td>5/30/23</td>
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</tr>
<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B4. Diversity, Women</td>
<td>% of direct awards to women (meet or exceed DoE NCES data).</td>
<td>60%</td>
<td>5/30/23</td>
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<tr>
<td>1,2,3</td>
<td>6,7</td>
<td>B5. Diversity, Under-represented</td>
<td>% of direct awards to under-represented groups (meet or exceed DoE NCES data).</td>
<td>42%</td>
<td>5/30/23</td>
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<tr>
<td>1,2,3</td>
<td>5,6</td>
<td>C. Enhance</td>
<td>C1. Authentic Experiences</td>
<td>% of students agree with &quot;gained useful skills and experience.&quot;</td>
<td>75%</td>
<td>5/30/23</td>
</tr>
<tr>
<td>1,2,3</td>
<td>1,5</td>
<td>C2. Effectiveness</td>
<td>% of teachers agree with &quot;make me more effective.&quot;</td>
<td>75%</td>
<td>5/30/23</td>
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<td>3,7</td>
<td>C4. D. Enlighten</td>
<td>D1. Increase Awareness</td>
<td>% of participants agree with &quot;increased my awareness.&quot;</td>
<td>75%</td>
<td>5/30/23</td>
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<td>1,3,7</td>
<td>C5. D2. NASA Opportunities</td>
<td>% of affiliates/partners agree with &quot;kept aware of relevant NASA opportunities.&quot;</td>
<td>80%</td>
<td>5/30/23</td>
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</tr>
</tbody>
</table>

### Strategic Priorities

<table>
<thead>
<tr>
<th>Strategic Priority Alignment</th>
<th>Space Grant Objective Alignment</th>
<th>Goal</th>
<th>Objective</th>
<th>Metrics</th>
<th>Target</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3</td>
<td>1,2,5,6,7</td>
<td>A. Engage</td>
<td>A1. Fellowships</td>
<td>total # of graduate fellows funded</td>
<td>32</td>
<td>4/30/24</td>
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<tr>
<td>1,2,3</td>
<td>2,6,7</td>
<td>A2. Internships</td>
<td>total # of undergraduate internships funded</td>
<td>36</td>
<td>4/30/24</td>
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<tr>
<td>1,2,3</td>
<td>1,2,3</td>
<td>A3. Affiliates</td>
<td># of affiliate institutions active as members of the MSSGC network</td>
<td>16</td>
<td>5/30/23</td>
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<tr>
<td>1,2,3</td>
<td>2,3,5,6</td>
<td>A4. Student-Led STEM</td>
<td>total # of student-led STEM teams funded</td>
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<td>8/30/23</td>
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<tr>
<td>1,2,3</td>
<td>2,3,4,6,7</td>
<td>A5. Seed Grants</td>
<td>total # of NASA STEM Seed Grants awarded</td>
<td>8</td>
<td>8/30/23</td>
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<td>total # of participants in STEM training activities</td>
<td>200</td>
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